

**SONY®**

---

AUTO SLIDE FEEDER

**UYA-S90SF**

---

**SERVICE MANUAL**

1st Edition

---

## 警告

このマニュアルは、サービス専用です。

お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

## **WARNING**

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

## **WARNUNG**

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

## **AVERTISSEMENT**

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

# Table of Contents

## Manual Structure

Purpose of this manual .....	3 (E)
Related manual .....	3 (E)

## 1. Operating Instructions

## 2. Service Information

2-1. Feeder Assembly .....	2-1 (E)
2-1-1. Main Parts Location .....	2-1 (E)
2-1-2. Removal and Installation of Cabinet .....	2-1 (E)
2-1-3. Replacement of Main Parts .....	2-2 (E)
2-1-4. Cleaning/Replacement of Main Roller .....	2-5 (E)
2-2. Carrier Assembly .....	2-5 (E)
2-2-1. Main Parts Location .....	2-5 (E)
2-2-2. Replacement of Main Parts .....	2-5 (E)
2-3. Tools .....	2-7 (E)

## 3. Mechanical Operation Description

## 4. Semiconductor Pin Assignments

## 5. Spare Parts

5-1. Notes on Repair Parts .....	5-1
5-2. Exploded Views .....	5-2
5-3. Electrical Parts List for Boards .....	5-6
5-4. Parts List for Frame .....	5-8
5-5. Packing Materials .....	5-9

## 6. Block Diagram

6-1.	Circuit Description .....	6-1 (E)
6-1-1.	CN-2083 Board .....	6-1 (E)
6-1-2.	MEC-13 Board .....	6-1 (E)
6-1-3.	LE-238 Board .....	6-1 (E)
6-1-4.	SE-564 Board .....	6-1 (E)
6-1-5.	SE-611 Board .....	6-1 (E)
6-1-6.	SU-59 Board .....	6-1 (E)
6-1-7.	SU-60 Board .....	6-1 (E)
6-2.	Overall Block Diagram .....	6-3

## 7. Schematic Diagrams and Board Layouts

### Schematic Diagrams

MEC-13 .....	7-1
CN-1959 .....	7-2
CN-2083 .....	7-2
LE-238 .....	7-2
SE-561 .....	7-2
SE-562 .....	7-2
SE-563 .....	7-2
SE-564 .....	7-3
SE-611 .....	7-3
SU-59 .....	7-3
SU-60 .....	7-3
Frame .....	7-4

### Board Layouts

MEC-13 .....	7-6
CN-2083 .....	7-6
LE-238 .....	7-7
SE-564 .....	7-7
SE-611 .....	7-7
SU-59 .....	7-7
SU-60 .....	7-7

## Manual Structure

---

### Purpose of this manual

This manual is the service manual of the Auto Slide Feeder UYA-S90SF (feeder and carrier assembly).

This manual is intended for use by trained system and service engineers, and describes the information for maintenance and detailed service.

---

### Related manual

In addition to this “Service Manual”, this unit is provided with the manual below.

- **Operating Instructions (Supplied for product.)**

Part No.: 3-204-878-01

This manual describes the information required for the actual management and operation of this unit.

- **“Semiconductor Pin Assignments” CD-ROM (Available on request)**

This “Semiconductor Pin Assignments” CD-ROM allows you to search for semiconductors used in Communication System Solutions Network Company equipment.

Semiconductors that cannot be searched for on this CD-ROM are listed in the service manual for the corresponding unit. The service manual contains a complete list of all semiconductors and their ID Nos., and thus should be used together with the CD-ROM.

Part number: 9-968-546-XX



SONY®

3-204-878-01(1)

# *Auto Slide Feeder*

---

Operating Instructions

GB

## Section 1 Operating Instructions

Reprinted from the  
operating instructions

UYA-S90SF

© 2000 Sony Corporation

**For the customers in the USA**  
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

**For the customers in Canada**  
This Class A digital apparatus complies with Canadian ICES-003.

Table of Contents

**Features ..... 4(GB)**

**Checking the Package ..... 4(GB)**

**Mounting the Slide Carrier to the Film Scanner ..... 5(GB)**

**Mounting the Auto Slide Feeder on the Film Scanner ..... 6(GB)**

**Prescanning/Scanning the Slides Continuously ..... 8(GB)**  
    Setting on Feeder Window ..... 8(GB)  
    Prescanning/Scanning ..... 9(GB)

**Prescanning/Scanning One Slide only ..... 11(GB)**  
    Attaching the Slide Attachment to the Slide Carrier ..... 11(GB)  
    Loading a Slide into the Carrier ..... 11(GB)

**Maintenance ..... 12(GB)**  
    Cleaning and Replacing the Rubber Roller of the Auto Slide Feeder ..... 12(GB)  
    Cleaning inside the Slide Carrier ..... 13(GB)  
    Cleaning the Cabinet ..... 13(GB)

**Precautions ..... 14(GB)**

**Specifications ..... 14(GB)**



## Features

The UYA-S90SF consists of the Slide Carrier to scan slides, mounted 135 film or IX240 film, with the UY-S90 film scanner, and the Auto Slide Feeder to automatically load multiple slides one by one to the Slide Carrier.

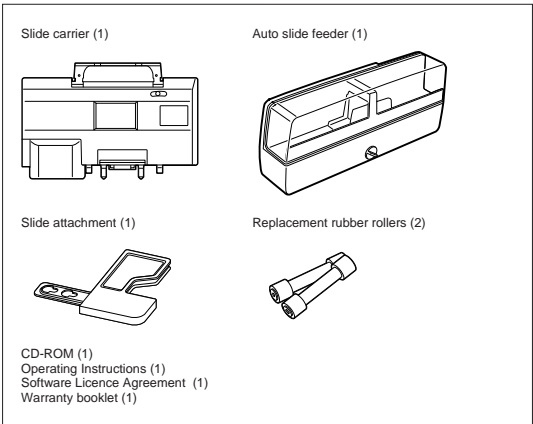
Using the Auto Slide Feeder, you can prescan and scan up to 50 slides continuously.

**Note**

For details on the operation of the film scanner, refer to the Operating Instructions and Software Manual supplied with the film scanner.

## Checking the Package

This product consists of the following parts. Check that nothing is missing from your package.



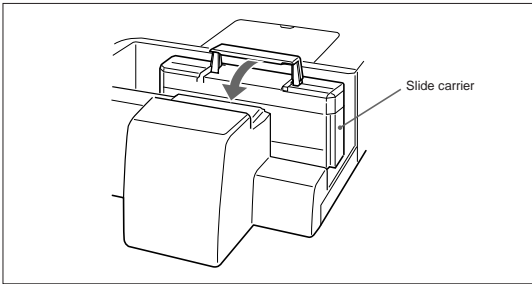
**Notes**

- Retain the original carton and packing materials in case you have to transport the parts in the future.
- Remove the slide carrier and the auto slide feeder when transporting the film scanner.

## Mounting the Slide Carrier to the Film Scanner

### Mounting the carrier

Insert the slide carrier into the film scanner as shown in the figure, and fold down the handle to lock. Then close the carrier cover.

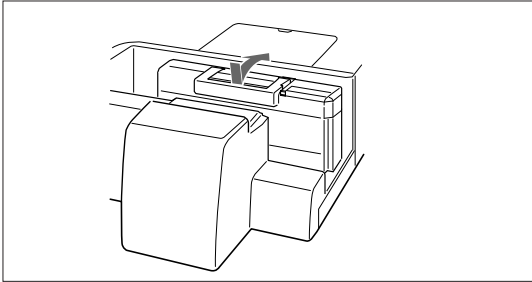


**Note**

Be sure to close the carrier cover and lamp cover of the film scanner. If either cover is open, previewing and scanning cannot be performed. Also, opening the cover during previewing or scanning stops the operation.

### Removing the carrier

Press the handle to unlock and lift the carrier.



## Mounting the Auto Slide Feeder on the Film Scanner

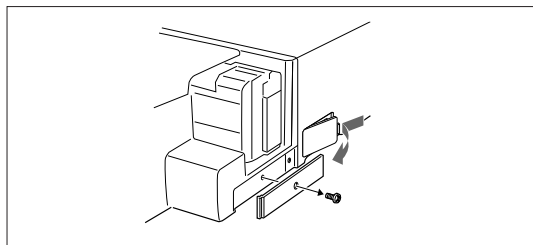
When you want to prescan/scan multiple slides continuously, mount the supplied auto slide feeder on the film scanner.

### Note

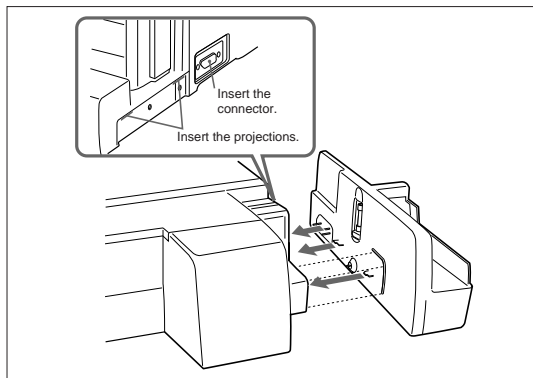
The mounting should be performed on a rigid, flat surface such as on a desk, as the screw on the auto slide feeder cannot support the weight of the auto slide feeder.

Install the film scanner on a base which covers the auto slide feeder.

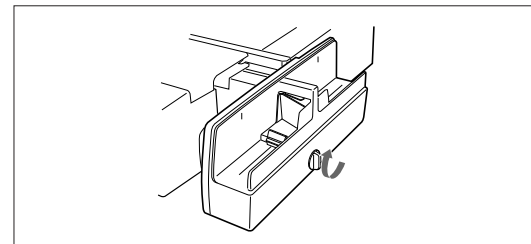
- 1 Remove the side panel of the film scanner and the cover of the slide feeder connector.



- 2 Mount the auto slide feeder on the film scanner.  
Insert the two projections on the rear of the auto slide feeder into the slits on the film scanner, and the connector to the slide feeder connector.  
For easier positioning, place the auto slide feeder parallel to the side of the film scanner, then fit the square projected part of the auto slide feeder to the film scanner as illustrated.



- 3 Tighten the screw to secure the auto slide feeder.



### Note

To avoid damaging the screw of the auto slide feeder, do not tighten it excessively.

## Prescanning/Scanning the Slides Continuously

To prescan/scan the slides continuously, use the auto slide feeder. This section explains the operations related to the auto slide feeder only. For the other operations, refer to the software manual of the UY-S90 film scanner.

### Note

For using the auto slide feeder, the film scanner firmware should be version 2.01 or later, and the software should be version 4.0 or later. The required firmware and software are included in the supplied CD-ROM. For version upgrade, refer to "Readme" in the CD-ROM.

### Slide mounts applicable to the auto slide feeder

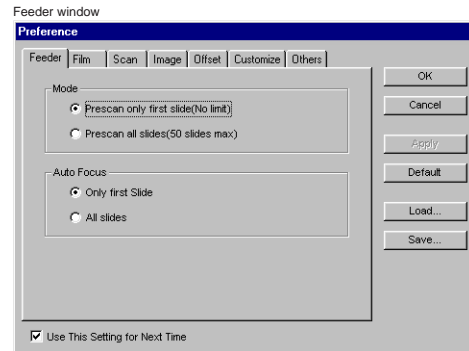
Mount your slides on the following slide mounts.

- Slide mount of 1 to 2.5 mm ( $1/16$  to  $1/8$  inch) thickness
- Plastic mounts recommended
- Paper mount whose edge is broken or curled is not suitable.

Some slide mounts cannot be used even if they meet the above conditions.

## Setting on Feeder Window

The Feeder window appears only when the auto slide feeder is connected to the film scanner.



### Mode

**Prescan only first slide (No limit):** Prescans and previews the first slide set on the auto slide feeder only. Adjust the preview image appropriately and start scanning. The other slides on the auto slide feeder are scanned, without previewing, under the same conditions adjusted for the first slide. You can stop scanning temporarily using the Pause button displayed during scanning to add slides to the auto slide feeder.

**Prescan all slides (50 slides max):** Prescans up to 50 slides set on the auto slide feeder continuously. After prescanning, all the frames are previewed. You can adjust frames as required and select the frames for scanning.

### Auto Focus

**Only first slide:** Adjusts the focus only for the first slide set on the auto slide feeder. The other slides are prescanned and scanned with the same focus conditions adjusted for the first slide. Normally use this mode.

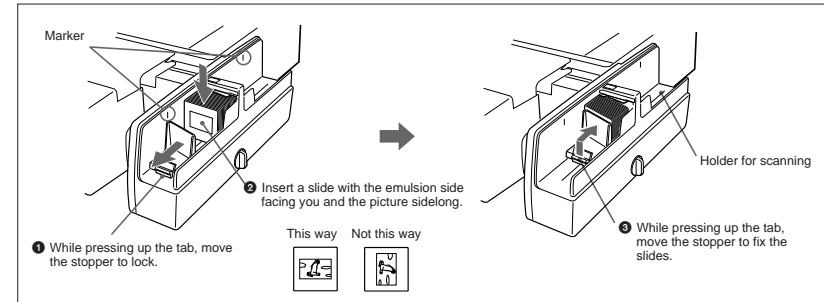
**All slides:** Adjusts the focus for each slide set on the auto slide feeder. Use this mode when you want to adjust the focus precisely for every slide.

## Prescanning/Scanning

- 1 Set the Mode and Auto Focus on the Feeder window.

For details, see "Setting on the Feeder Window" on page 8(GB).

- 2 Insert the slides to be prescanned into the holder for prescanning on the auto slide feeder.  
You can insert slides until they reach the marker on the side. When you have set "Mode" on the Feeder window to "Prescan all slides (50 slides max)," however, up to 50 slides can be inserted.



- 3 Click the Preview button on the preview window.  
The slides on the auto slide feeder are automatically fed into the carrier, prescanned and ejected to the holder for scanning. When you have set "Mode" to "Prescan only first slide (No limit)," only the first slide is prescanned and previewed on the window. When you have set "Mode" to "Prescan all slides (50 slides max)," all the slides on the auto slide feeder are prescanned and previewed on the screen.

### Notes

- Do not change the order of the slides ejected to the holder for scanning, as the film scanner scans the slides in the same order as that of prescanning.
- The position of the prescanned/scanned image may shift horizontally and/or vertically depending on the slide mount.

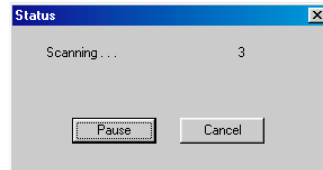
(continued)

## Prescanning/Scanning the Slides Continuously

- 4 Adjust the prescanned image as required.  
When you have set "Mode" to "Prescan all slides (50 slides max)," select the images to be scanned.
- 5 Click the Scan button on the preview window.  
When the Scan Utility is used, specify the saving method for the scanned images and click the Save button.  
The selected slides are scanned.

### To scan more than 50 slides continuously

When you have set "Mode" to "Prescan only first slide (No limit)," the following window appears during scanning.



Click the Pause button to temporarily stop scanning. Then you can insert more slides into the holder for prescanning on the auto slide feeder. After setting the required slides, click the Continue button to restart scanning.

#### Note

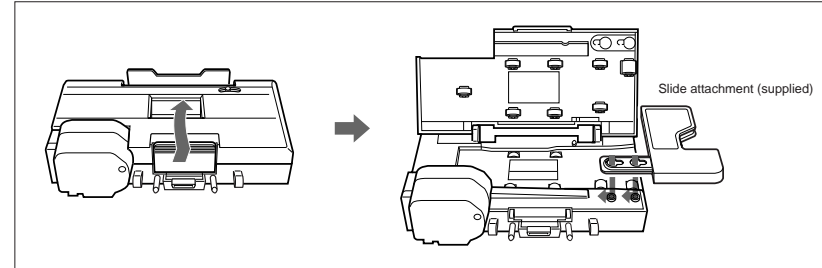
When you have added slides to the holder for prescanning, remove the scanned slides in the holder for scanning. If the holder is full of slides, the ejected slides may clog, causing an error.

## Prescanning/Scanning One Slide only

To prescan/scan only one slide, use the supplied slide attachment. For details on the prescanning/scanning operations, refer to the software manual of the UY-S90 film scanner.

### Attaching the Slide Attachment to the Slide Carrier

- 1 Open the lid of the slide carrier and attach the supplied slide attachment to the slide carrier.

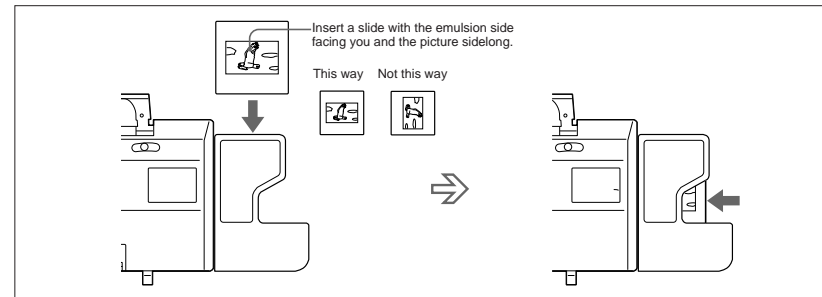


- 2 Close the lid of the slide carrier.
- 3 Mount the slide carrier to the film scanner.

For mounting, "Mounting the Slide Carrier to the Film Scanner" on page 5(GB).

### Loading a Slide into the Carrier

Insert a slide into the slide attachment with the emulsion side facing you, and lightly press the slide to the left.



## Maintenance

### Cleaning and Replacing the Rubber Roller of the Auto Slide Feeder

#### Cleaning the rubber roller

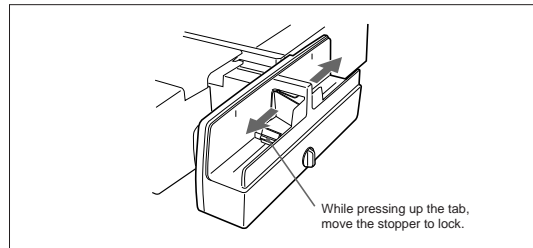
If the rubber roller of the auto slide feeder is dirty, slides may clog easily. Clean the rubber roller regularly with a cloth moistened with water or alcohol. Frequent cleaning is required, especially when you use paper slide mounts.

*For how to remove and replace the rubber roller, see "Replacing the rubber roller."*

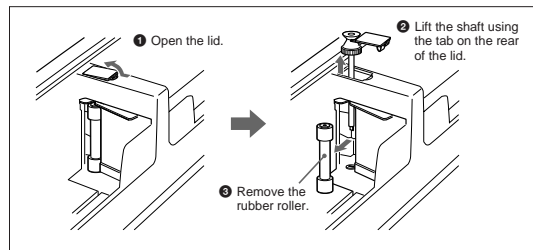
#### Replacing the rubber roller

When the rubber roller wears and the blue portion appears, replace it with the supplied new rubber roller.

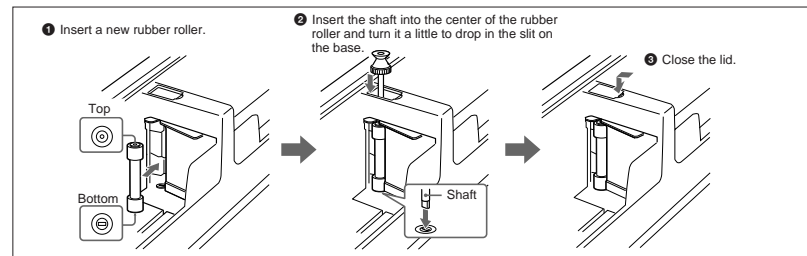
- 1 Remove all slides from the auto slide feeder, and lock the stoppers for the holder for prescanning and the holder for scanning.



- 2 Remove the old rubber roller.



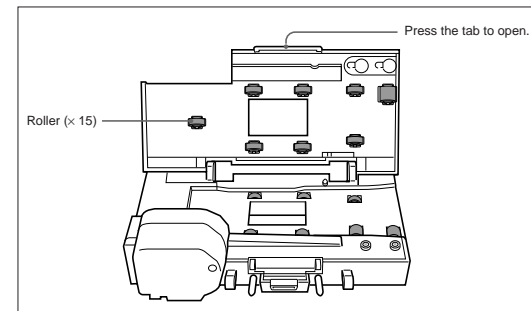
- 3 Insert a new rubber roller and close the lid. Make sure the top and bottom of the rubber roller are positioned correctly.



For more replacement rubber rollers, consult your authorized Sony dealer.

### Cleaning inside the Slide Carrier

Inside the slide carrier, there are 15 rollers (shaded in the following figure). Press the tab to open the carrier and wipe the rollers with a cloth slightly moistened with water.



### Cleaning the Cabinet

When the cabinet becomes dirty, wipe it with a cloth moistened with water or neutral detergent dissolved in water. Do not use benzene, alcohol, thinner or chemical cloth as these may damage the finish.



Precautions

- Keep the unit away from extremely hot or humid places.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust or humidity, mechanical vibration or shock.
- Keep the unit away from strong magnetic fields or mechanical vibration.
- Save the original shipping carton and packing material; they will come in handy if you ever have to ship your unit. For maximum protection, repack the unit as it was originally packed at the factory.

Specifications

Applicable film	Slides (mounted) of 135 film and IX240 film
Dimensions	Slide carrier: Approx. 231 × 135 × 46 mm (w/h/d) (9 1/8 × 5 3/8 × 1 13/16 inches) Auto slide feeder: Approx. 80 × 148 × 354 mm (w/h/d) (3 1/4 × 5 7/8 × 14 inches) not including projecting part
Mass	Slide carrier: Approx. 0.55 kg (1 lb 3 oz) Auto slide feeder: Approx. 1.4 kg (3 lb 1 oz)
Supplied accessories	Slide attachment (1) Replacement rubber roller (2) CD-ROM (1) Operating Instructions (1) Software Licence Agreement (1) Warranty booklet (1)

Design and specifications are subject to change without notice.

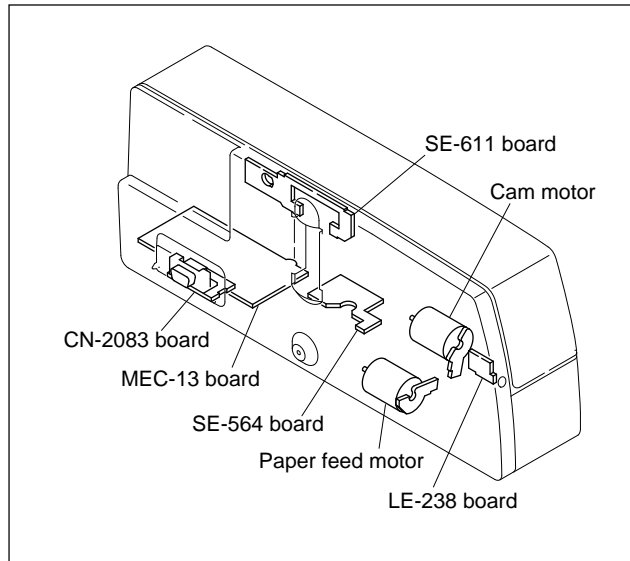
## Section 2

### Service Information

#### 2-1. Feeder Assembly

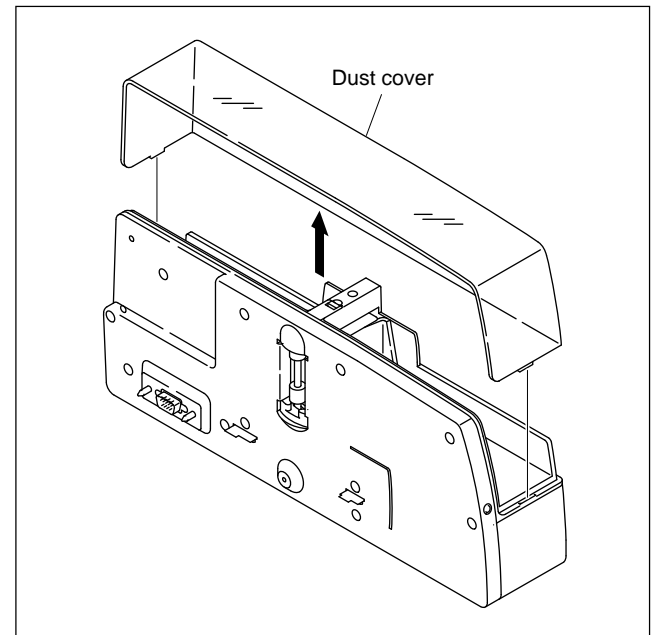
##### 2-1-1. Main Parts Location

###### 1. Main Parts Location

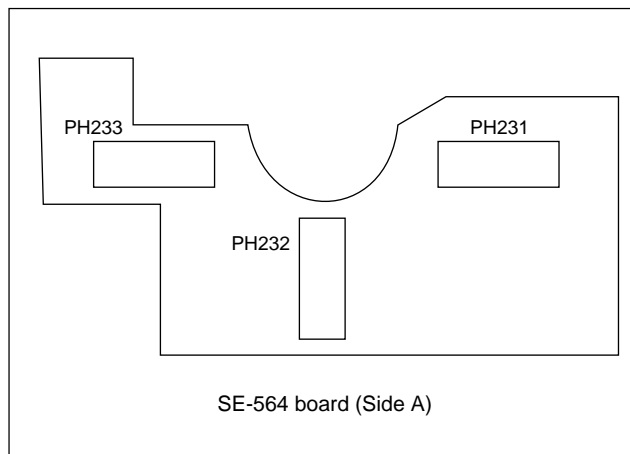


##### 2-1-2. Removal and Installation of Cabinet

###### 1. Dust Cover

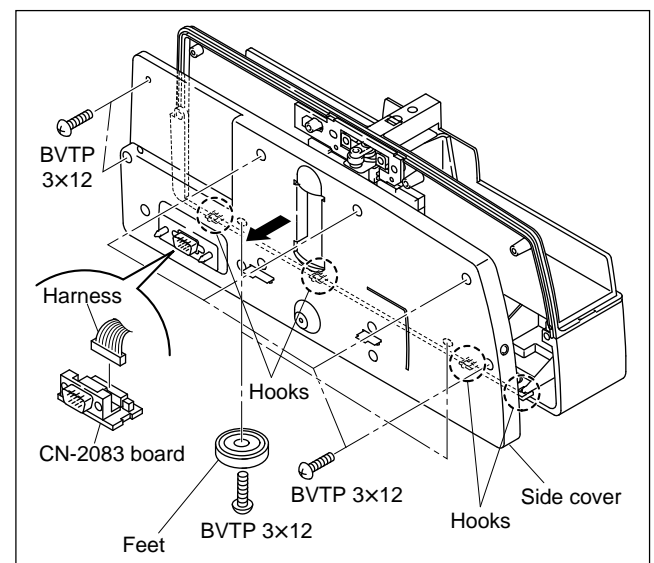


###### 2. Sensor Location (SE-564 board)



###### 2. Side Cover

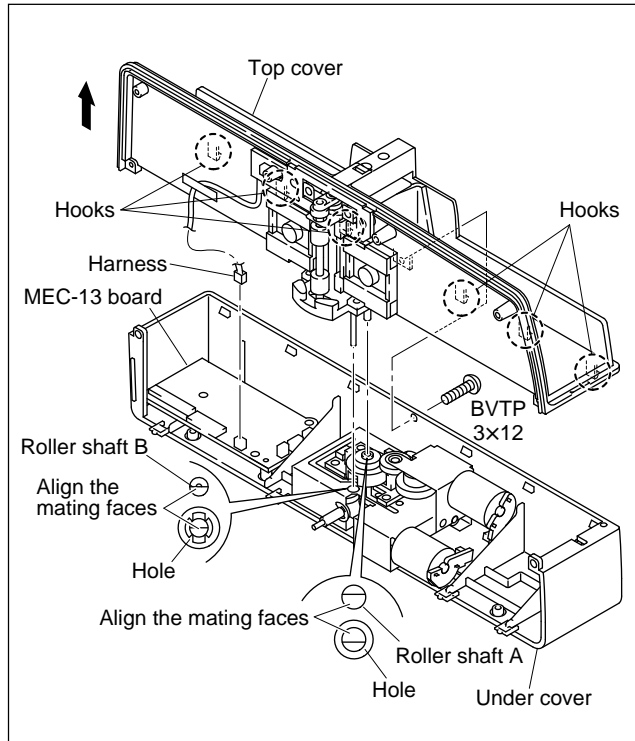
- (1) Remove the eight screws and two feet, then remove the four hooks.
- (2) Remove the side cover in the direction indicated by the arrow, then remove one harness from the CN-2083 board.



- (3) Attach the side cover in the reverse order of steps (1) and (2).

### 3. Top Cover/Under Cover

- (1) Remove the side cover. (Refer to Section 2-1-2.2)
- (2) Disconnect one harness from the MEC-13 board.
- (3) Remove one screw, then remove the six hooks.
- (4) Remove the top cover in the direction indicated by the arrow.



- (5) Attach the top cover in the reverse order of steps (1) to (4).

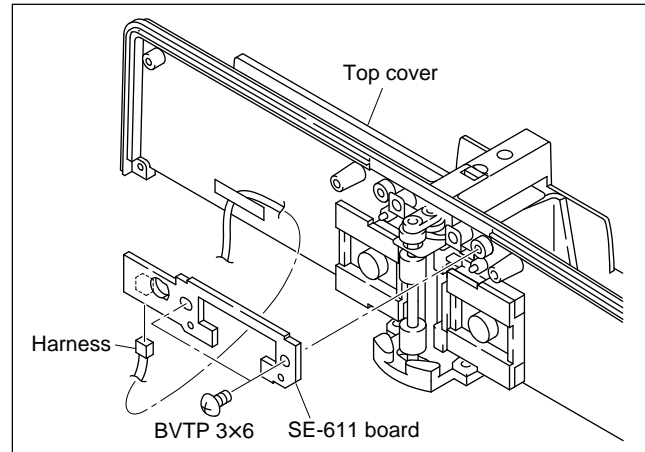
#### Note

When attaching the top cover, make sure to align the mating faces before inserting the roller shafts A and B into each hole.

### 2-1-3. Replacement of Main Parts

#### 1. Replacement of SE-611 Board

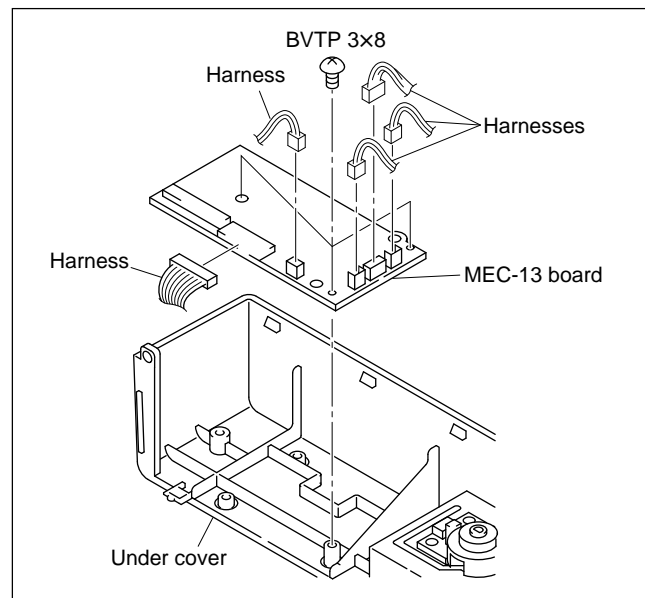
- (1) Remove the side cover. (Refer to Section 2-1-2.2)
- (2) Disconnect one harness from the SE-611 board.
- (3) Remove the two screws, then remove the SE-611 board.



- (4) Attach a new SE-611 board in the reverse order of steps (1) to (3).

#### 2. Replacement of MEC-13 Board

- (1) Remove the side cover. (Refer to Section 2-1-2.2)
- (2) Remove the top cover and under cover. (Refer to Section 2-1-2.3)
- (3) Disconnect the five harnesses from the MEC-13 board.
- (4) Remove the three screws, then remove the MEC-13 board.

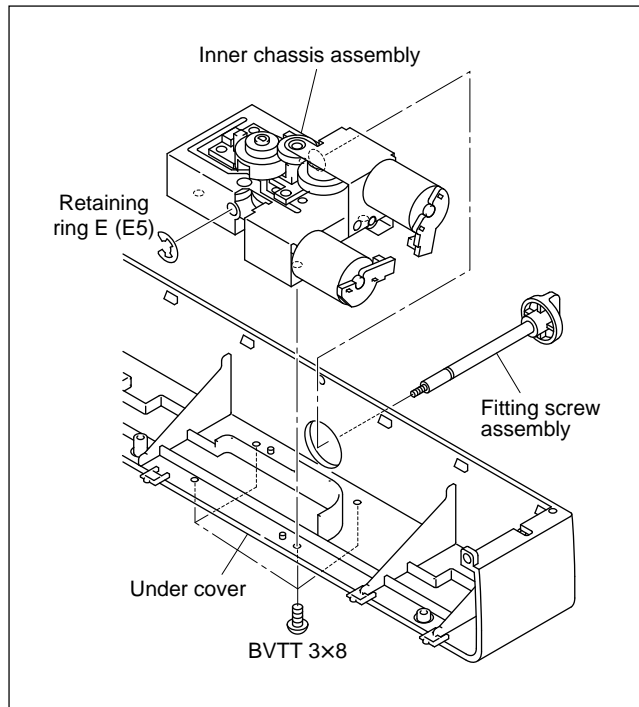


- (5) Attach a new MEC-13 board in the reverse order of steps (1) to (4).



### 3. Replacement of Inner Chassis Assembly

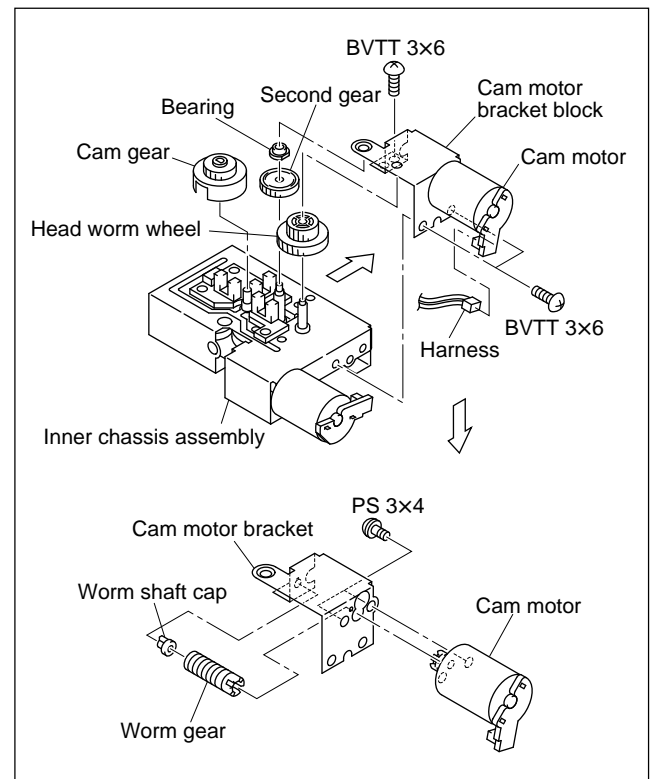
- (1) Remove the side cover. (Refer to Section 2-1-2.2)
- (2) Remove the top cover and under cover. (Refer to Section 2-1-2.3)
- (3) Remove one retaining ring E (E5), then remove the fitting screw assembly.
- (4) Remove the four screws, then remove the inner chassis assembly.



- (5) Attach the inner chassis assembly in the reverse order of steps (1) to (4).

### 4. Replacement of Cam Motor

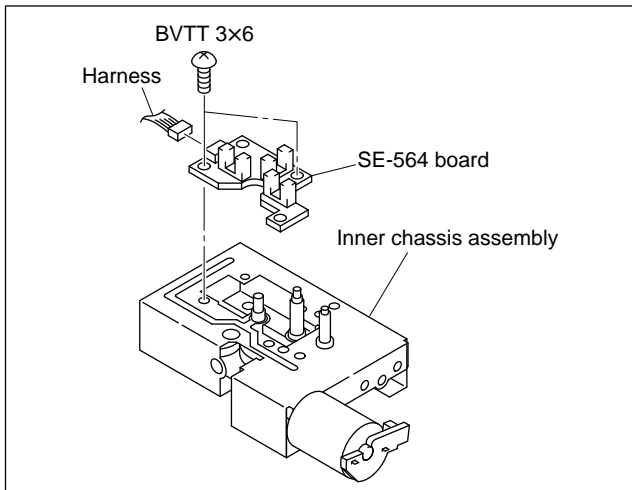
- (1) Remove the side cover. (Refer to Section 2-1-2.2)
- (2) Remove the top cover and under cover. (Refer to Section 2-1-2.3)
- (3) Remove the inner chassis assembly. (Refer to Section 2-1-3.3)
- (4) Disconnect one harness from the cam motor.
- (5) Remove the three screws (BVTT 3x6), then remove the cam motor bracket block.
- (6) Remove the two screws (PS 3x4), then remove the cam motor.



- (7) Attach a new cam motor in the reverse order of steps (1) to (6).

## 5. Replacement of SE-564 Board

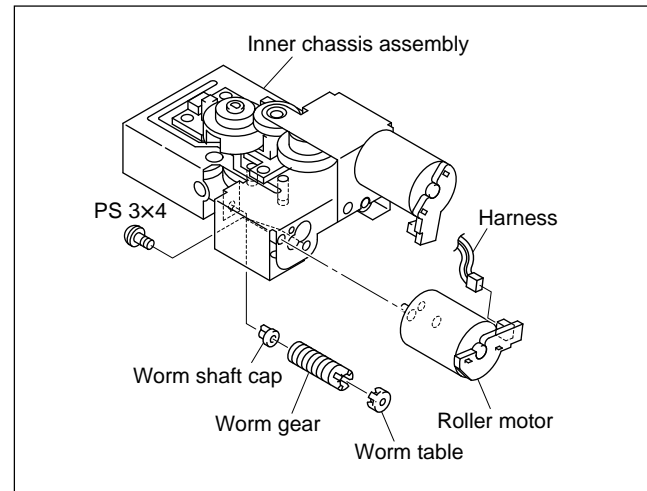
- (1) Remove the side cover. (Refer to Section 2-1-2.2)
- (2) Remove the top cover and under cover. (Refer to Section 2-1-2.3)
- (3) Remove the inner chassis assembly. (Refer to Section 2-1-3.3)
- (4) Remove the cam motor bracket. (Refer to Section 2-1-3.4)
- (5) Disconnect one harness from the SE-564 board.
- (6) Remove the two screws, then remove the SE-564 board.



- (7) Attach a new SE-564 board in the reverse order of steps (1) to (6).

## 6. Replacement of Roller Motor

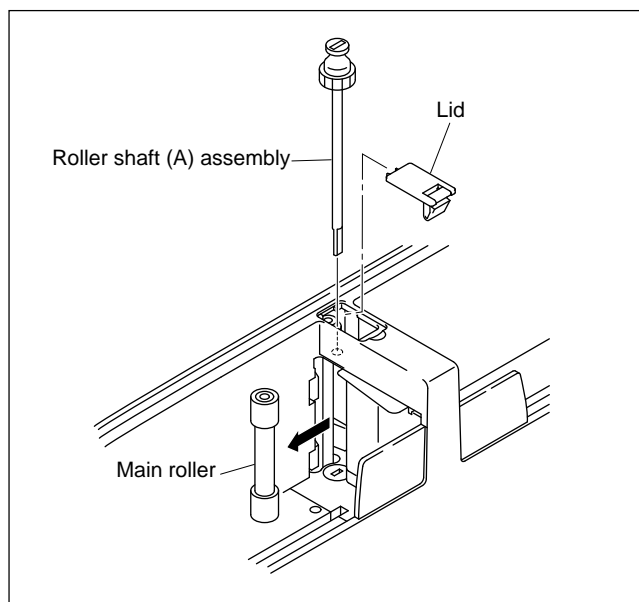
- (1) Remove the side cover. (Refer to Section 2-1-2.2)
- (2) Remove the top cover and under cover. (Refer to Section 2-1-2.3)
- (3) Remove the inner chassis assembly. (Refer to Section 2-1-3.3)
- (4) Disconnect one harness from the roller motor.
- (5) Remove the two screws, then remove the roller motor.



- (6) Attach a new roller motor in the reverse order of steps (1) to (5).

### 2-1-4. Cleaning/Replacement of Main Roller

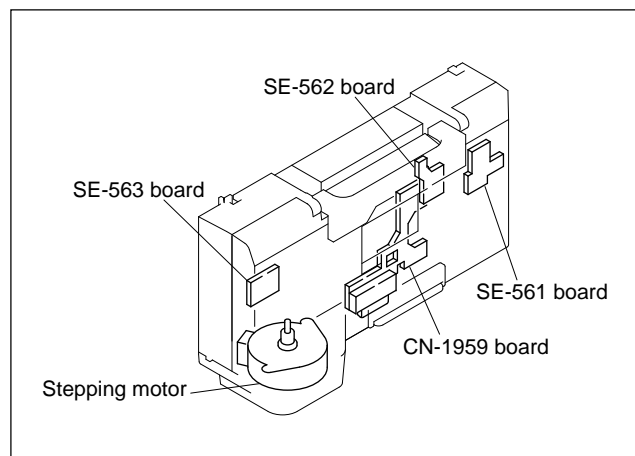
- (1) Remove the lid, then pull out the roller shaft (A) assembly.
- (2) Remove the main roller in the direction indicated by the arrow.
- (3) Clean the main roller with a cleaning cloth moistened with cleaning liquid.



- (4) Attach a new main roller in the reverse order of steps (1) and (2).

## 2-2. Carrier Assembly

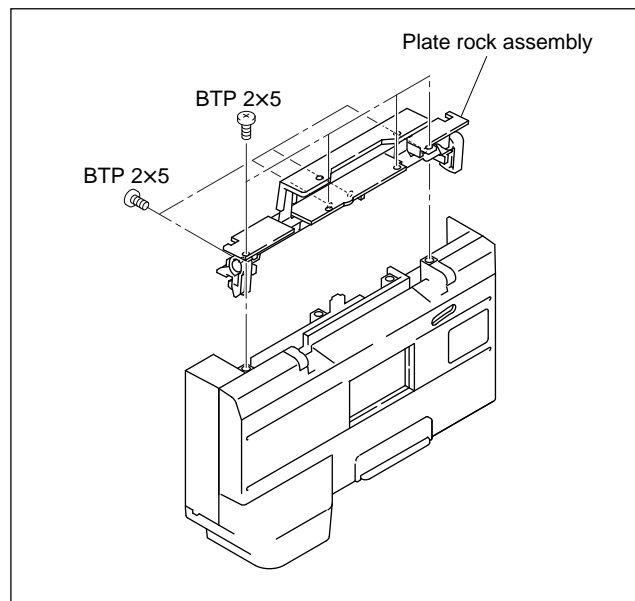
### 2-2-1. Main Parts Location



### 2-2-2. Replacement of Main Parts

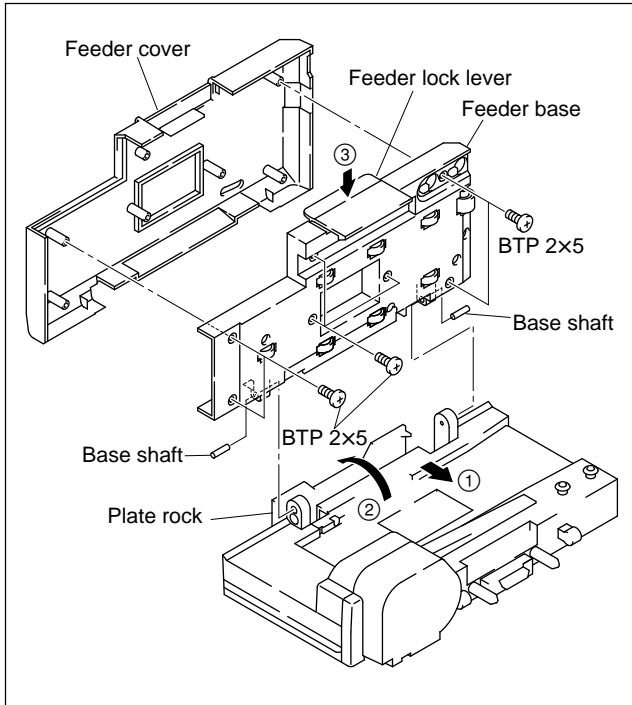
#### 1. Removal of Plate Rock Assembly

Remove the eight screws, then remove the plate rock assembly.

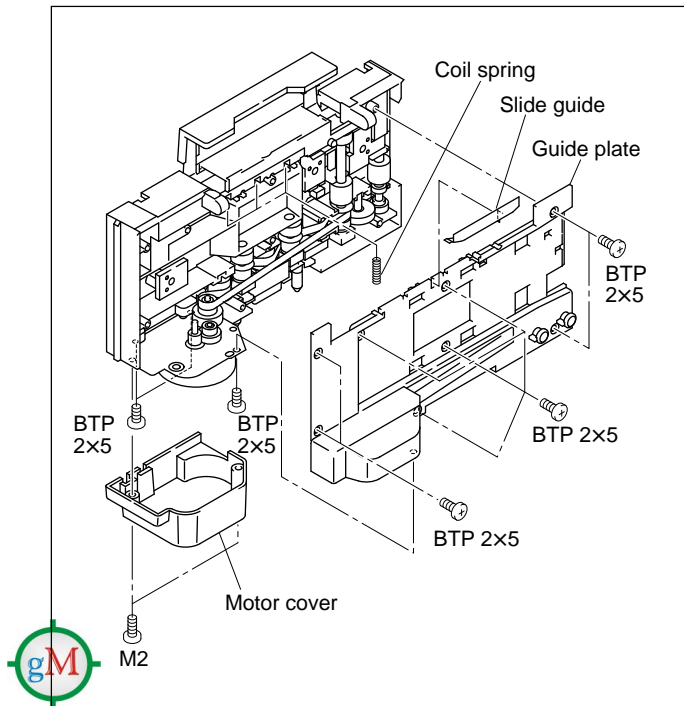


## 2. Replacement of Stepping Motor

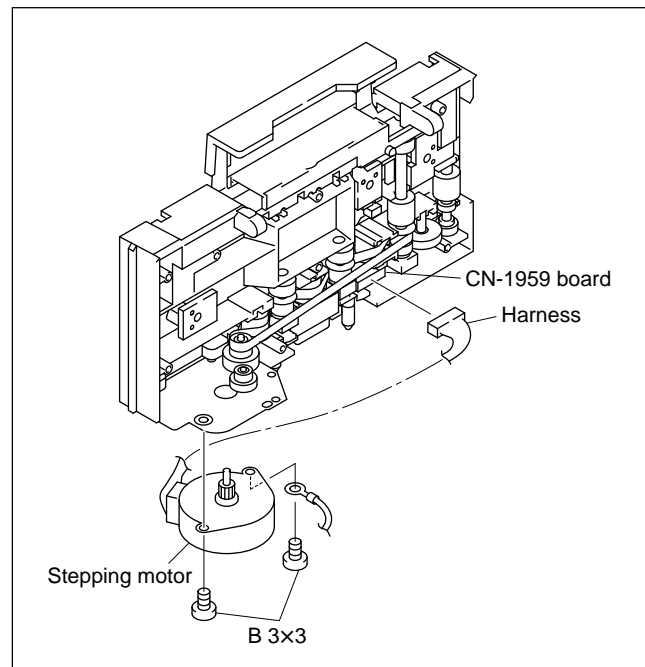
- (1) Push the plate rock lightly in the direction indicated by arrow ①, then move it in the direction indicated by arrow ② and release the lock.
- (2) Push the feeder lock lever in the direction indicated by arrow ③, then release the lock.
- (3) Remove the seven screws, then remove the feeder cover.
- (4) Remove the two base shafts, then remove the feeder base.



- (5) Remove the slide guide and three coil springs.
- (6) Remove the two screws (M2), then remove the motor cover.
- (7) Remove the eleven screws (BTP2x5), then remove the guide plate.



- (8) Disconnect one harness from the CN-1959 board.
- (9) Remove the two screws, then remove the stepping motor.



- (10) Remove the plate rock assembly in the reverse order of steps (6) to (9).

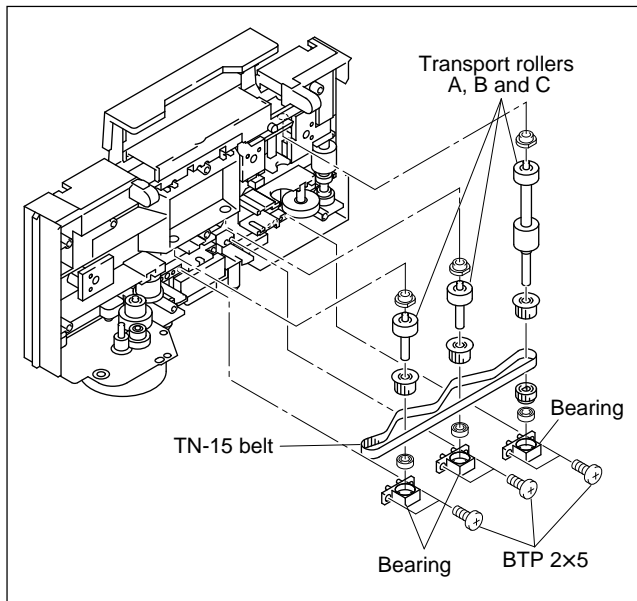
**Note**

Secure the stepping motor temporarily with the two screws (B3×3) before attaching the guide plate.

- (11) Attach the slide guide and three coil springs, then attach a new stepping motor in the reverse order of steps (1) to (4).

### 3. Replacement of TN-15 Belt

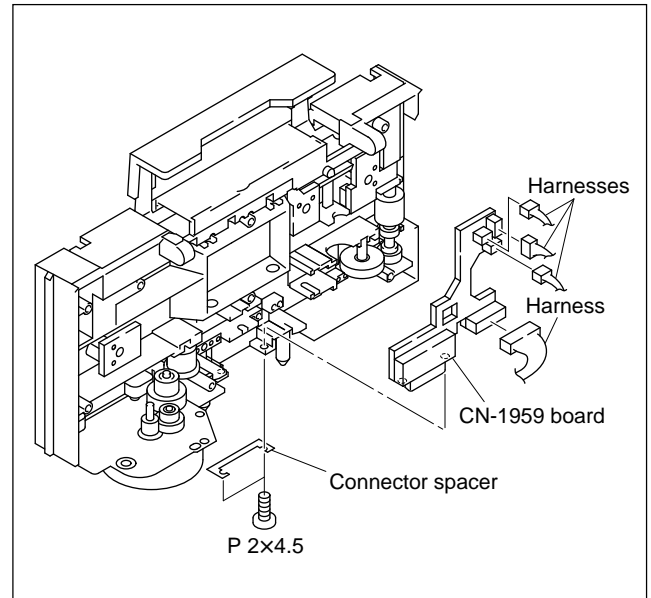
- (1) Remove the feeder base. (Refer to Section 2-2-2.1)
- (2) Remove the guide plate. (Refer to Section 2-2-2.1)
- (3) Remove the six screws, then remove the three bearings.
- (4) Remove the transport rollers A, B and C, then remove the TN-15 belt.



- (5) Attach a new TN-15 belt in the reverse order of steps (1) to (4).

### 4. Replacement of CN-1959 Board

- (1) Remove the feeder base. (Refer to Section 2-2-2.1)
- (2) Remove the guide plate. (Refer to Section 2-2-2.1)
- (3) Disconnect the four harnesses, then remove the two screws.
- (4) Remove the connector spacer.
- (5) Remove the CN-1959 board.



- (6) Attach a new CN-1959 board in the reverse order of steps (1) to (5).

## 2-3. Tools

### Tools used for cleaning the main roller are:

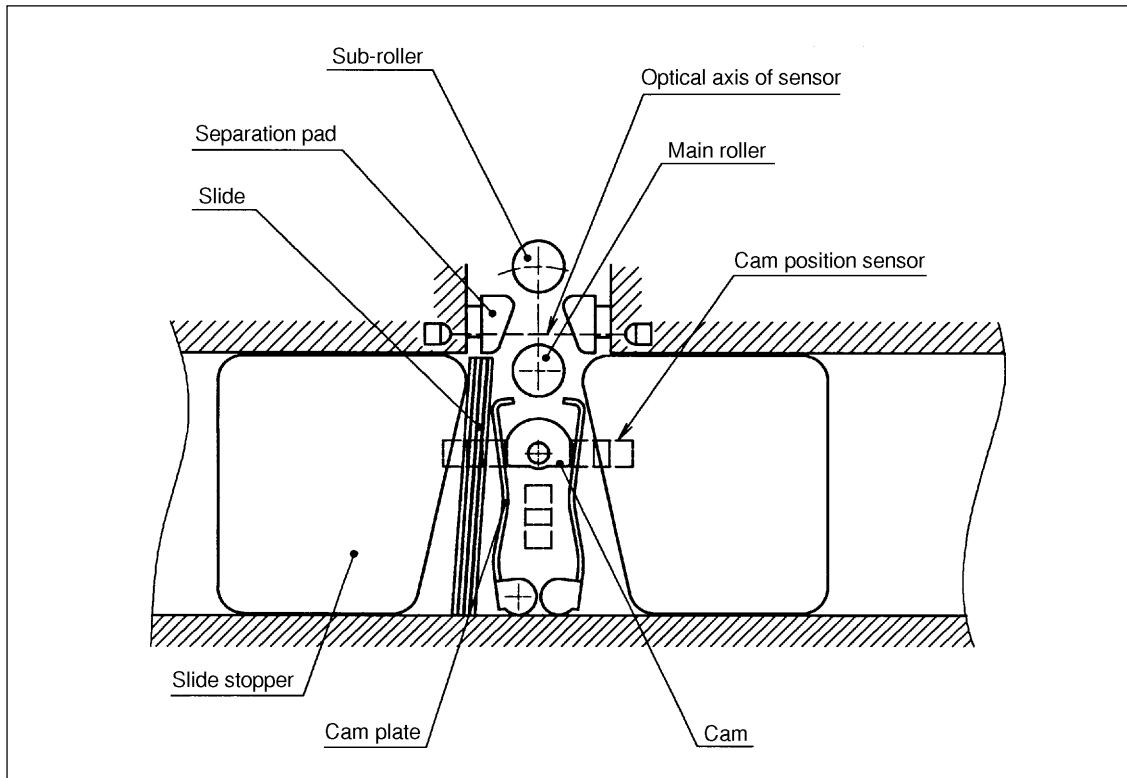
- Cleaning cloth: 3-184-527-01
- Cleaning liquid: 9-919-573-01



### Section 3

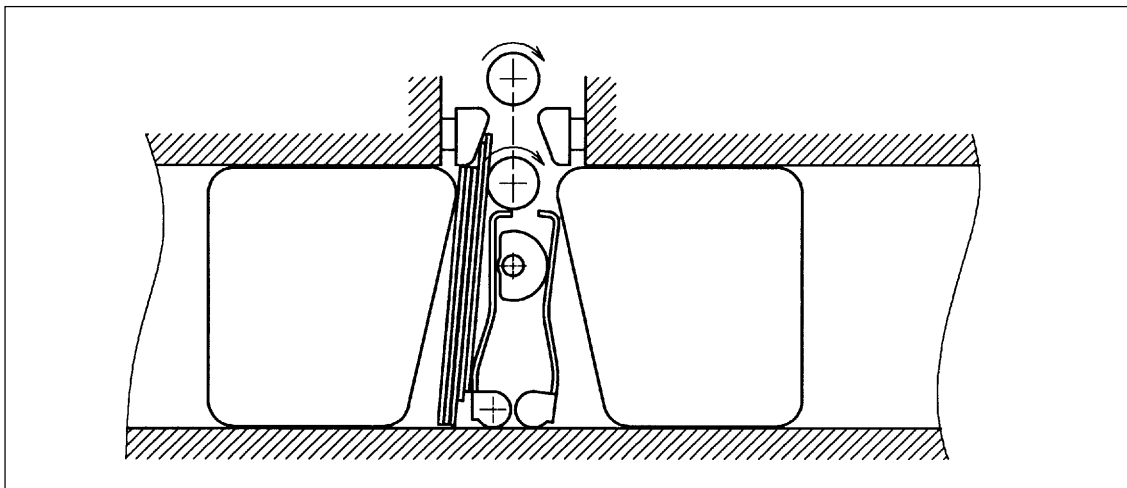
## Mechanical Operation Description

Each part name and location described in this text are shown below.

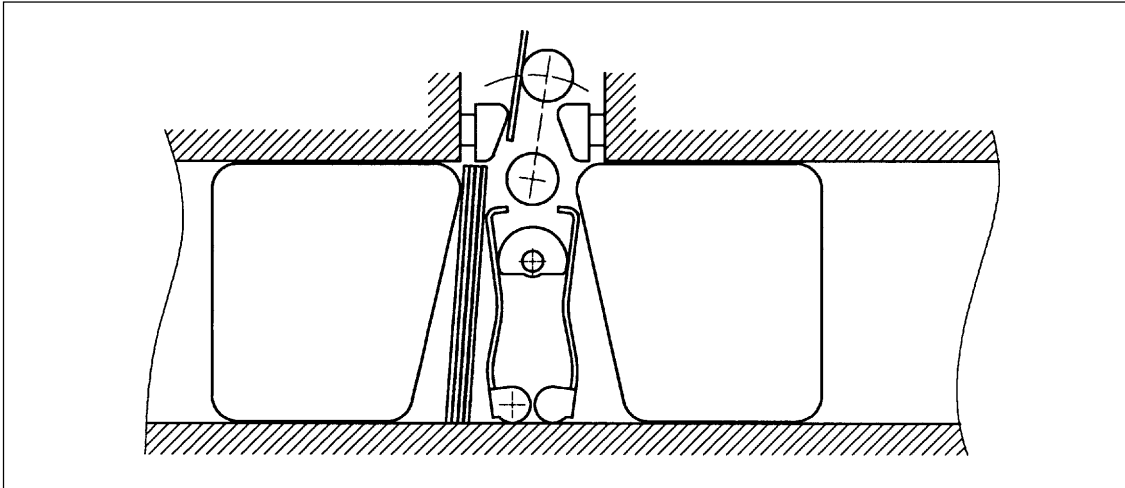


### Description of feeder operation

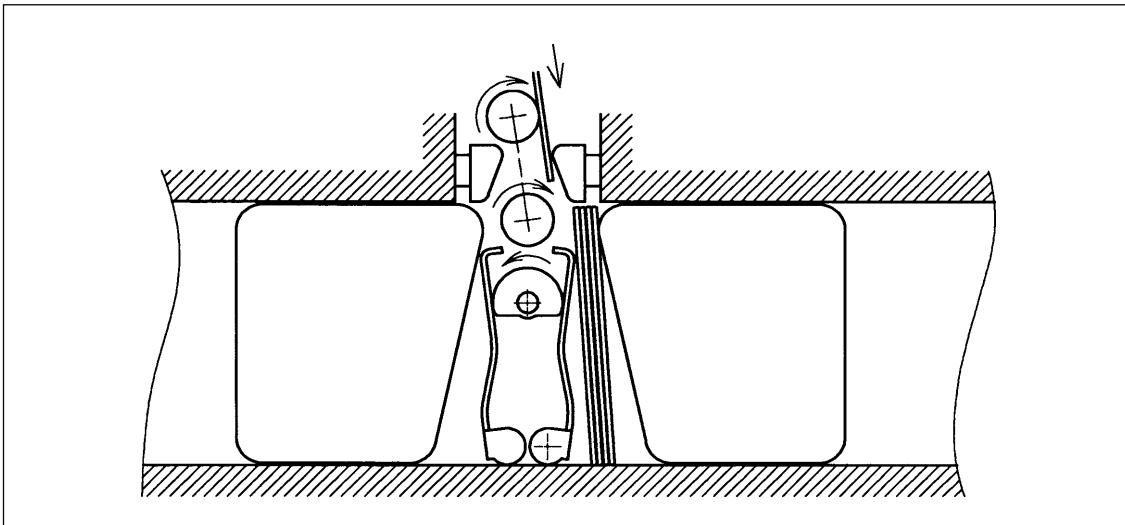
1. The slide placed between the slide stopper and cam plate touches the main roller with the cam plate moved when the cam rotates clockwise by 90 degrees.



2. The slide that touches the main roller is passed between the two rollers and separation pad by rotation (in the clockwise direction) of the main roller and sub-roller and carried to the carrier assembly. The cam returns to the first position when the slide is passed through the cam plate. At that time, the sub-roller moves as the slide is carried. This enables the slide to be carried smoothly. It also prevents the optical axis of a sensor from carrying the slide in overlap. The slide carried to the carrier assembly is pre-scanned once.

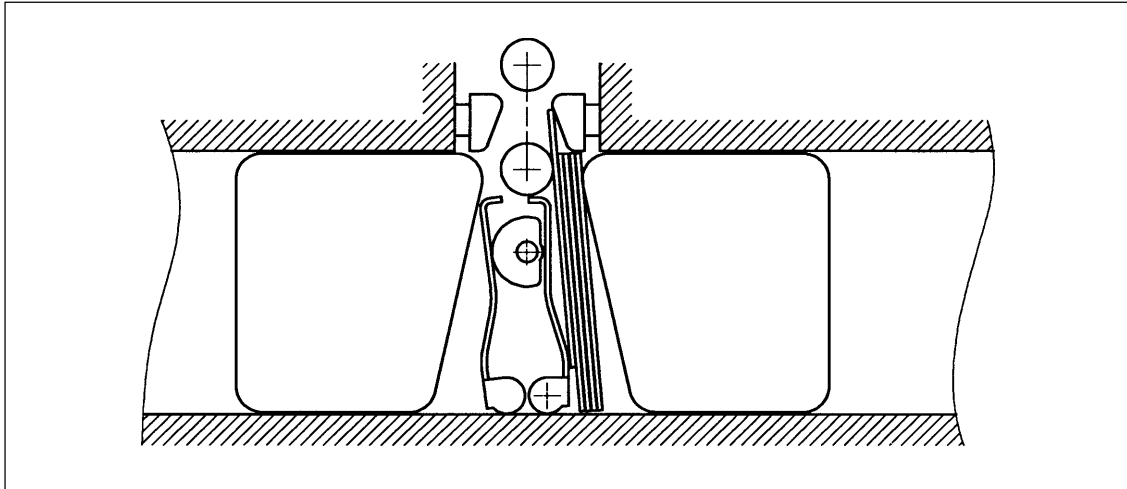


3. The pre-scanned slide is carried between the two rollers and separation plate on the opposite side of the router through which it was passed first. The cam also rotates counterclockwise by 90 degrees.

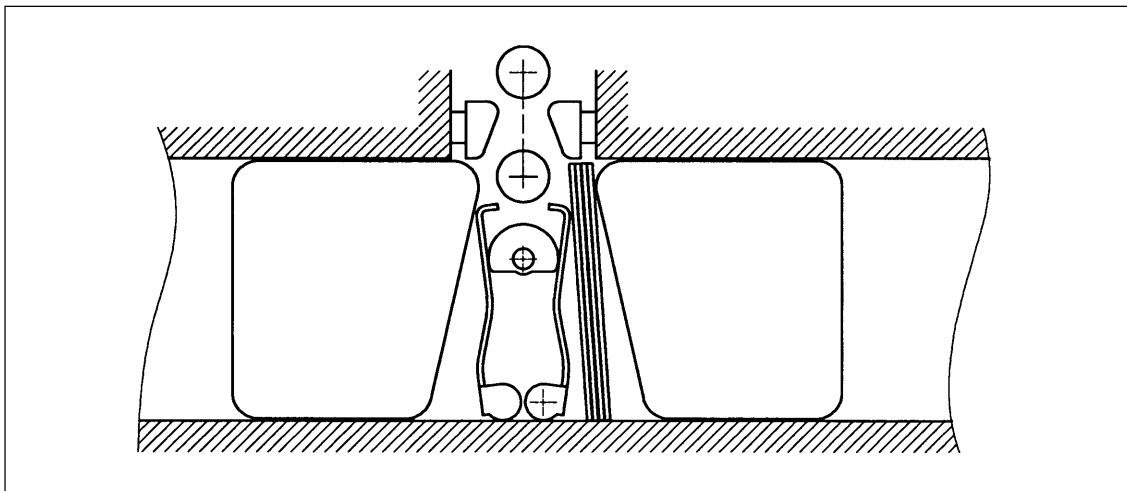




4. When the cam rotates, the cam plate moves so that the slide can be smoothly carried between the slide stopper and cam plate.



5. The slide is set, and the carrying of the next slide is started. After the set slide is completely pre-scanned, the slide shifts to the scanning (normal scanning) operation.



- Scanning is performed based on the operation opposite to during pre-scanning.
- The slide that has completed the scanning operation returns to the position set first.



# Section 4

## Semiconductor Pin Assignments

The following describes the semiconductor types used in this unit.

For semiconductors marked with page numbers in the index, refer to the corresponding pages in this section.

However, in some cases incompatible types are also listed, therefore, when a part is to be replaced, also refer to the Spare Parts section.

In addition, for semiconductors with ID Nos., refer to the separate CD-ROM titled “Semiconductor Pin Assignments” (Sony Part No. 9-968-546-xx) that allows searching for parts by semiconductor type or ID No.

The semiconductors in the manual or on the CD-ROM are listed by equivalent types. Thus the external view or the index mark indication may differ from the actual type.

Pin assignments and block diagrams are based on the IC manufacturer’s data book.

本機に使用されている半導体型名の一覧を下記に示します。索引中、ページが記載されている半導体は、本章の該当ページを参照してください。ただし、互換性のない型名を併記している場合がありますので、部品を交換するときは、Spare Partsの章を参照してください。

また、ID番号が記載されている半導体は、別途発行の“Semiconductor Pin Assignments” CD-ROM版 (ソニー部品番号：9-968-546-xx)を参照してください。

半導体型名またはID番号から検索ができます。

マニュアルまたはCD-ROMに掲載されている半導体は、それぞれの機能を等価的に表わしたものです。

外観やインデックスマークの表示方法が実物と異なる場合があります。

ピン配置およびブロック図はICメーカーのデータブックに従いました。

DIODE	Page or ID No.
1S2837-T1 .....	DC001-03
1SS184 .....	DC001-03
RD5.6SB .....	DC008-04
RD5.6SB-T1 .....	DC008-04
<b>LED</b>	<b>Page or ID No.</b>
GL480 .....	LR089-01
SLR-342MGT32 .....	LR014-02

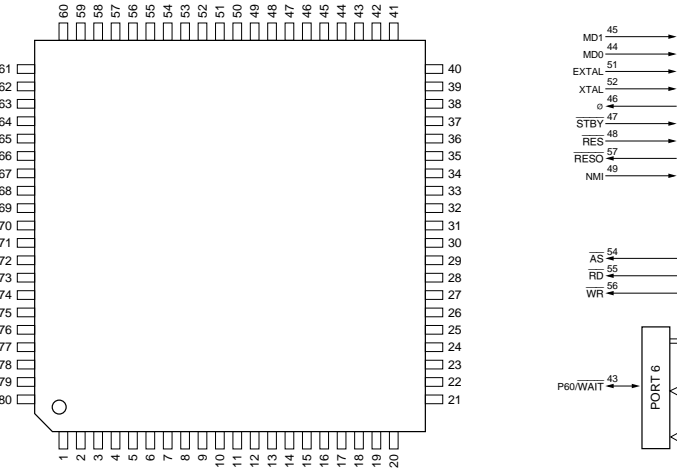
TRANSISTOR	Page or ID No.
PT480F .....	TR037-02

IC	Page or ID No.
HD6413004F .....	4-2
M54543L .....	M54543L
S-80840ANUP-ED4-T2 .....	S-8054HN-CB
SN74HC04ANS .....	TC74HC04P
SN74HC04ANSR .....	TC74HC04P
SN74HC138ANS .....	TC74HC138P
SN74HC138ANSR .....	TC74HC138P
SN74LS541NS .....	SN74LS541N
SN74LS541NSR .....	SN74LS541N
SST39SF010-70-4C-NH .....	AM29F010-75JC

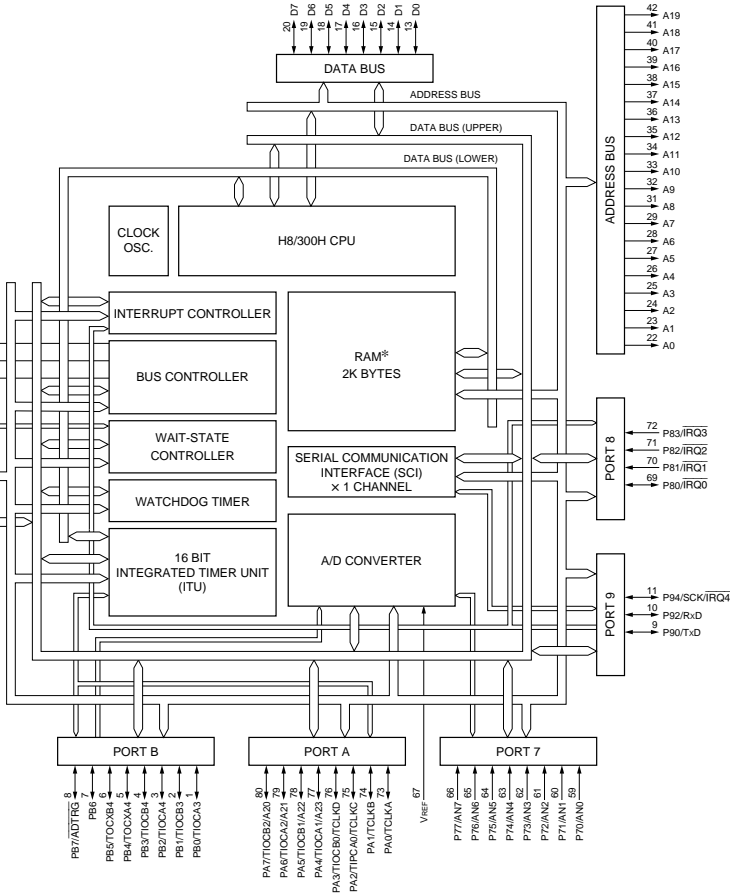
OTHER	Page or ID No.
GP1S58V .....	MR010-02
GP2S40K .....	MA013-01

IC

HD6413004F (HITACHI)  
16-BIT SINGLE CHIP MICROCOMPUTER  
—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I/O	PB0/TIOCA3	21	—	Vcc	41	O	A18	61	I	P72/AN2
2	I/O	PB1/TIOCB3	22	O	A0	42	O	A19	62	I	P73/AN3
3	I/O	PB2/TIOCA4	23	O	A1	43	I/O	P60/WAIT	63	I	P74/AN4
4	I/O	PB3/TIOCB4	24	O	A2	44	I	MD0	64	I	P75/AN5
5	I/O	PB4/TOCA4	25	O	A3	45	I	MD1	65	I	P76/AN6
6	I/O	PB5/TOCB4	26	O	A4	46	O	o	66	I	P77/AN7
7	I/O	PB6	27	O	A5	47	I	STBY	67	I	VREF
8	I/O	PB7/ADTRG	28	O	A6	48	I	RES	68	—	A.Vcc
9	I/O	P90/TxD	29	O	A7	49	I	NMI	69	I/O	P80/IRQ0
10	I/O	P92/RxD	30	—	GND	50	—	GND	70	I	P81/IRQ1
11	I/O	P94/SCK/IRQ4	31	O	A8	51	I	EXTAL	71	I	P82/IRQ2
12	—	GND	32	O	A9	52	I	XTAL	72	I	P83/IRQ3
13	I/O	D0	33	O	A10	53	—	Vcc	73	I/O	PA0/TCLKA
14	I/O	D1	34	O	A11	54	O	AS	74	I/O	PA1/TCLKB
15	I/O	D2	35	O	A12	55	O	RD	75	I/O	PA2/TIOCB0/TCLKC
16	I/O	D3	36	O	A13	56	O	WR	76	I/O	PA3/TIOCB0/TCLKD
17	I/O	D4	37	O	A14	57	O	RESO	77	I/O	PA4/TIOCA1/A23
18	I/O	D5	38	O	A15	58	—	A.GND	78	I/O	PA5/TIOCB1/A22
19	I/O	D6	39	O	A16	59	I	P70/AN0	79	I/O	PA6/TIOCA2/A21
20	I/O	D7	40	O	A17	60	I	P71/AN1	80	I/O	PA7/TIOCB2/A20



NOTE  
\* : 2K BYTES IN THE H8/3004, 4K BYTES IN THE H8/3005.

- INPUTS**
- ADTRG : A/D TRIGGER
  - ANO - AN7 : ANALOG
  - EXTAL : CRYSTAL
  - IRQ0 - IRQ4 : INTERRUPT REQUEST
  - MD0, MD1 : MODE
  - NMI : INTERRUPT FOR NO MASKING
  - P70 - P77 : PORT7
  - P81 - P83 : PORT8
  - RES : RESET
  - RxD : RECEIVE DATA
  - STBY : STANDBY
  - TCLKA - TCLKD : CLOCK
  - VREF : REFERENCE VOLTAGE
  - WAIT : WAIT
  - XTAL : CRYSTAL

- OUTPUTS**
- A0 - A19 : ADDRESS BUS
  - AS : ADDRESS STROBE
  - RD : READ
  - RESO : RESET
  - TOCA4, TOCB4 : OUTPUT COMPARE
  - TxD : TRANSMIT DATA
  - WR : WRITE
  - o : SYSTEM CLOCK

- INPUTS/OUTPUTS**
- D0 - D7 : DATA BUS
  - P60 : PORT6
  - P80 : PORT8
  - P90, P92, P94 : PORT9
  - PA0 - PA7 : PORT A
  - PB0 - PB7 : PORT B
  - SCK : SERIAL CLOCK
  - TIOCA0 - TIOCA4 : INPUT CAPTURE/OUTPUT COMPARE
  - TIOCB0 - TIOCB4 : INPUT CAPTURE/OUTPUT COMPARE

## Section 5

### Spare Parts

#### 5-1. Notes on Repair Parts

##### 1. Safety Related Components Warning

###### **WARNING**

Components marked △ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

##### 2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

##### 3. Stock of Parts

Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

##### 4. Harness

Harnesses with no part number are not registered as spare parts.

In need of repair, get components shown in the list and repair using them.

#### 5-1. 補修部品注意事項

##### 1. 安全重要部品

###### **△ 警告**

△印のついた部品は安全性を維持するために重要な部品です。したがって、交換する時は必ず指定の部品を使ってください。

##### 2. 部品の共通化

ソニーから供給する補修用部品は、セットに使われているものと異なることがあります。

これは部品の共通化、改良等によるものです。

部品表には現時点での共通化された補修用部品が記載されています。

##### 3. 部品の在庫

部品表のSP (Supply code) 欄に “o” で示される部品は在庫していないことがあり、納期が長くなることがあります。

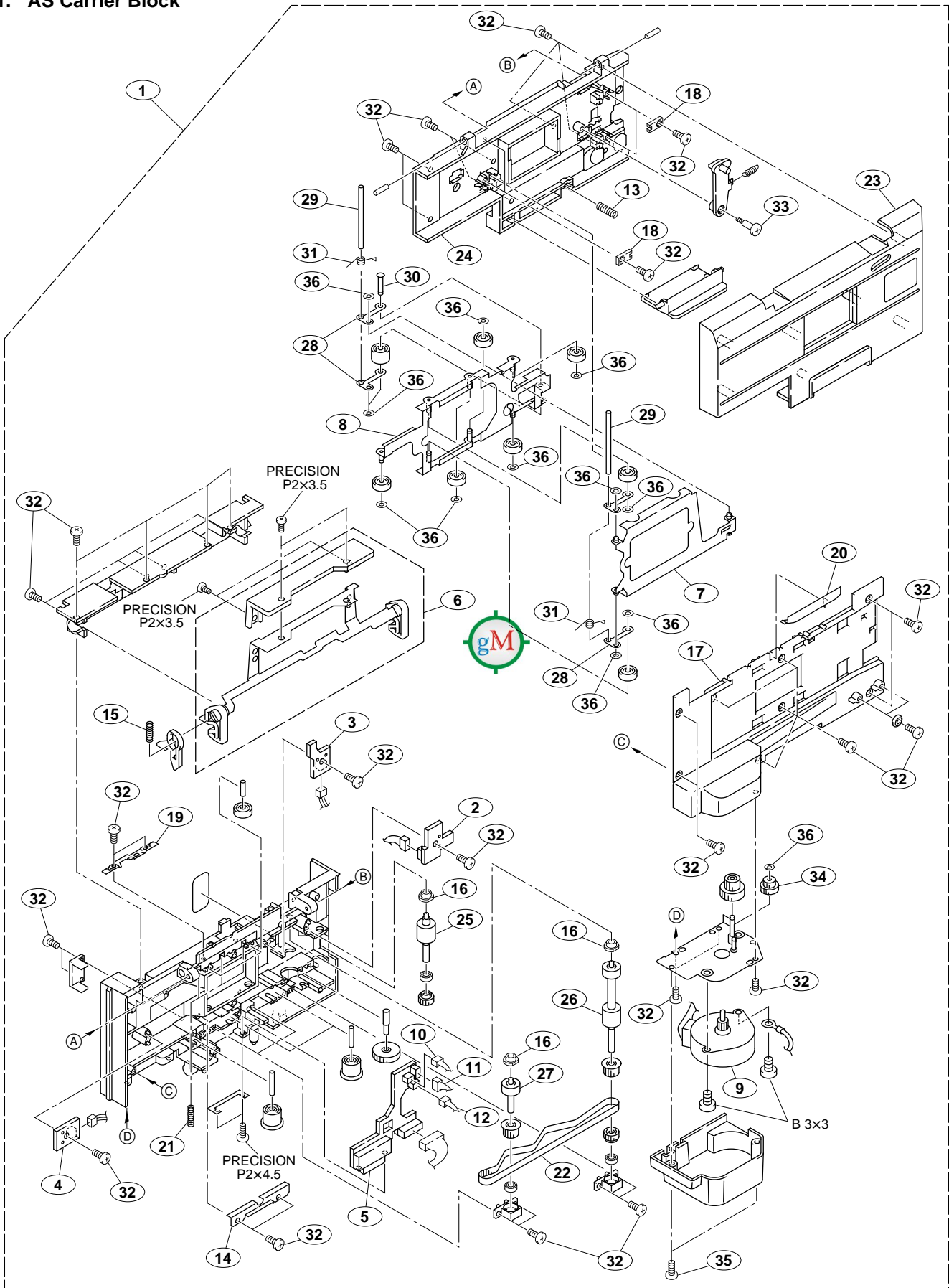
##### 4. ハーネス

部品番号が記載されていないハーネスは、サービス部品として登録されていません。

これらは、リストに展開されているコンポーネント部品で補修してください。

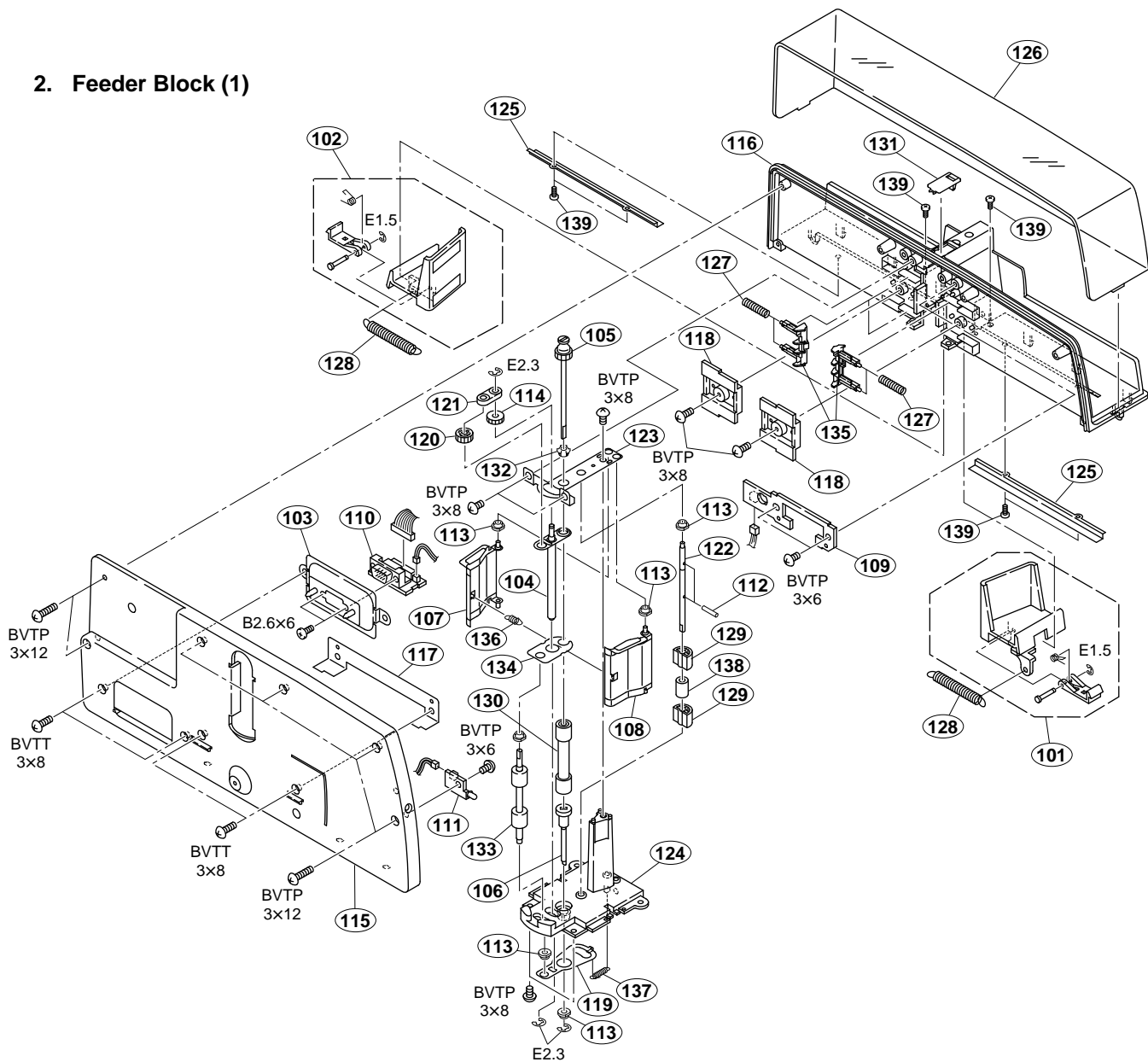
## 5-2. Exploded Views

### 1. AS Carrier Block



No.	Part No.	SP Description
1	A-8326-291-A	o CARRIER COMPLETE ASSY, AS
2	A-8326-296-A	o MOUNTED CIRCUIT BOARD, SE-561
3	A-8326-298-A	o MOUNTED CIRCUIT BOARD, SE-562
4	A-8326-300-A	o MOUNTED CIRCUIT BOARD, SE-563
5	A-8326-302-A	o MOUNTED CIRCUIT BOARD, CN-1959
6	X-3167-816-3	s PLATE ASSY, LOCK
7	X-3605-829-1	o ASSY, LINK A
8	X-3605-830-2	o ASSY, LINK B
9	1-763-600-11	s MOTOR, STEPPING
10	1-960-191-11	o HARNESS, SC A
11	1-960-192-11	o HARNESS, SC B
12	1-960-193-11	o HARNESS, SC C
13	3-189-689-01	s SPRING (F), COMPRESSION COIL
14	3-189-784-01	s SPACER, CONNECTOR
15	3-189-900-02	s SPRING, LOCK CAM
16	3-612-047-01	s BEARING(3.0)
17	3-626-621-01	s PLATE, GUIDE
18	3-626-622-01	s RETAINER
19	3-626-625-01	s RETAINER, SPRING
20	3-626-626-01	s GUIDE, SLIDE
21	3-626-627-01	s SPRING, COMPRESSION
22	3-626-631-01	s BELT, 172TN15-5.0T
23	3-626-632-01	o FEEDER COVER
24	3-626-633-01	o FEEDER BASE
25	3-626-641-01	s ROLLER, SUPPLY(A)
26	3-626-642-01	s ROLLER, SUPPLY(B)
27	3-626-643-01	s ROLLER, SUPPLY(C)
28	3-626-646-01	o LINK C
29	3-626-648-01	o SHAFT B, LINK
30	3-626-652-01	o SHAFT C, ROLLER
31	3-627-896-01	s SPRING, HELICAL TORSION
32	3-945-884-01	s SCREW (2X5)
33	3-950-001-01	s SCREW, STEP
34	3-950-048-01	s GEAR, SPM IDLER
35	3-964-010-01	s SCREW (M2)
36	4-926-219-02	s RING (DIA.2.3), RETAINING
	7-627-554-18	s SCREW, PRECISION +P 2X3.5
	7-627-553-58	s SCREW, PRECISION +P 2X4.5
	7-682-544-09	s SCREW +B3X3

## 2. Feeder Block (1)



No. Part No. SP Description

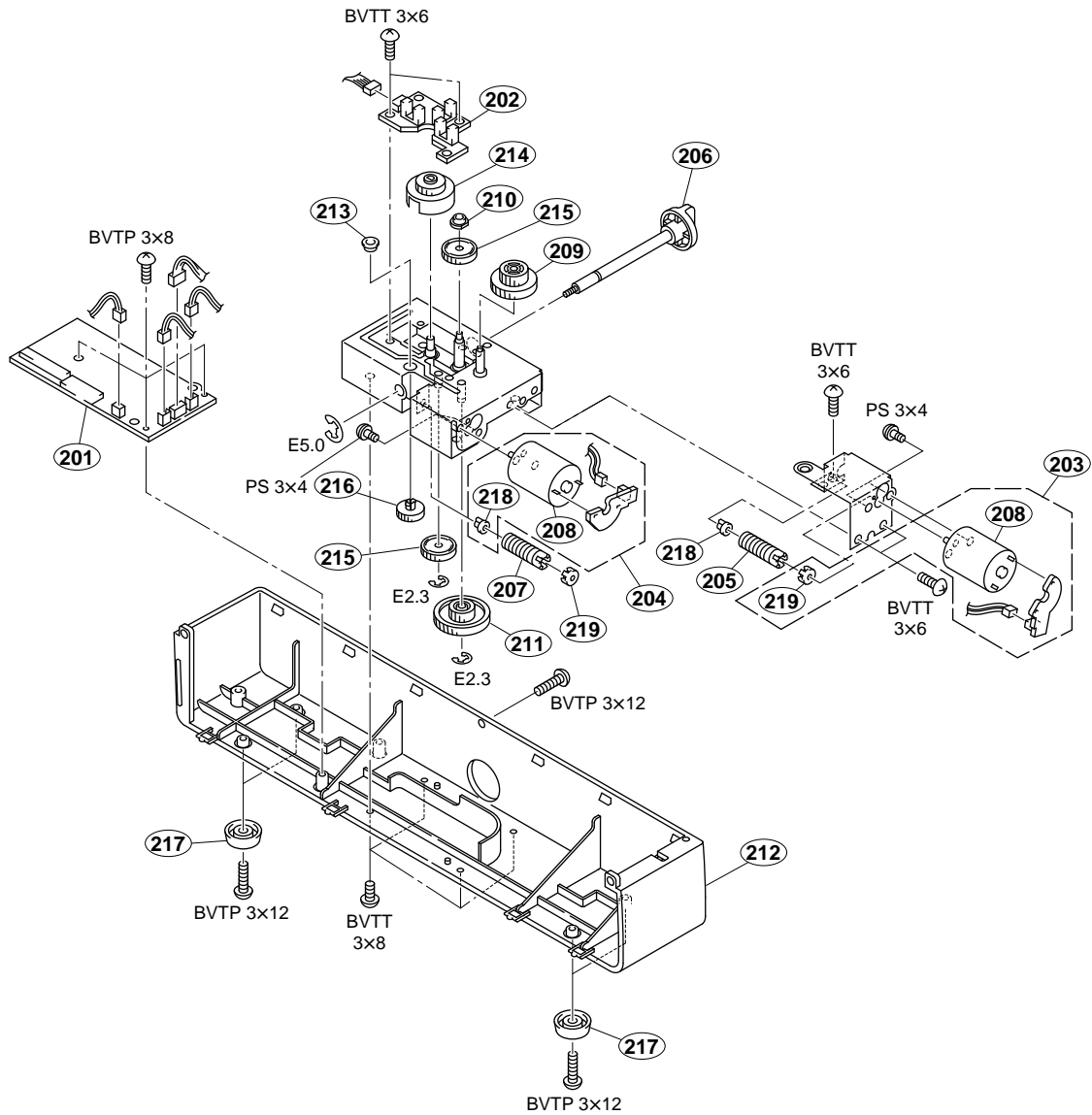
101	A-8279-542-A	s STOPPER ASSY (A), SLIDE
102	A-8279-543-A	s STOPPER ASSY (B), SLIDE
103	X-3608-101-1	o ASSY, CONECTER BRACKET
104	X-3608-102-2	o ASSY, UPPER ARM
105	X-3608-105-1	s SHAFT, ROLLER ASSY(A)
106	X-3608-106-1	o SHAFT, ROLLER ASSY(B)
107	X-3608-159-1	o ASSY, CAM PLATE A
108	X-3608-160-1	o ASSY, CAM PLATE B
109	1-679-704-11	o PRINTED WIRING BOARD, SE-611
110	1-679-707-11	o PRINTED WIRING BOARD, CN-2083
111	1-679-708-11	o PRINTED WIRING BOARD, LE-238
112	2-249-361-00	s PIN PARALLEL (2X10)
113	3-612-047-01	s BEARING(3.0)
114	3-612-136-02	s GEAR(10.0), IDLER
115	3-629-339-02	o SIDE COVER
116	3-629-341-04	o TOP COVER
117	3-629-345-01	o PLATE, POSITIONING
118	3-629-350-01	o COVER, PAD
119	3-629-351-01	o LOWER ARM
120	3-629-353-01	s GEAR, ROLLER(20A)
121	3-629-354-01	s GEAR, RETAINER
122	3-629-355-02	o SHAFT, CAM
123	3-629-356-02	o TOP PLATE

No. Part No. SP Description

124	3-629-363-02	o CENTER CHASSIS
125	3-629-367-01	o PLATE, INNER
126	3-629-368-01	o DUST COVER
127	3-629-369-01	s SPRING, COMPRESSION
128	3-629-370-02	s SPRING, EXTENSION
129	3-629-372-01	s CAM
130	3-629-373-01	s MAIN ROLLER
131	3-629-374-01	s LID
132	3-629-375-02	s BEARING (B)
133	3-629-499-03	s SUB ROLLER
134	3-631-433-01	o UPPER GUIDE
135	3-631-550-01	s PAD
136	3-631-604-01	s SPRING, EXTENSION
137	3-631-605-01	s SPRING, EXTENSION
138	3-668-048-11	o SPACER, 4 X 20 DIA
139	3-945-884-01	s SCREW (2X5)
	7-621-770-67	s SCREW +B2.6X6
	7-624-102-04	s STOP RING 1.5, TYPE -E
	7-624-105-04	s RING, E2.3
	7-685-645-79	s SCREW +BVTP3X6
	7-685-646-79	s SCREW +BVTP 3X8
	7-685-648-14	s SCREW +BVTP 3X12
	7-685-872-04	s SCREW +BVTT 3X8



### 3. Feeder Block (2)



No. Part No. SP Description

201 A-8326-955-A o MOUNTED CIRCUIT BOARD, MEC-13  
 202 A-8326-956-A o MOUNTED CIRCUIT BOARD, SE-564  
 203 A-8326-962-A s MOTOR ASSY, CAM  
 204 A-8326-963-A s MOTOR ASSY, ROLLER  
 205 X-3605-737-1 s GEAR ASSY, WORM

206 X-3608-104-1 s ASSY, FITTING SCREW  
 207 X-3737-811-1 s WORM BLOCK ASSY  
 208 1-541-309-11 s MOTOR, (RF-370C) (DC) (2.59W)  
 209 3-611-868-01 s WHEEL, HEAD WORM  
 210 3-612-047-01 s BEARING (3.0)

211 3-612-110-01 s WORM WHEEL, SUPPLY  
 212 3-629-340-01 o UNDER COVER  
 213 3-629-344-01 s BEARING (A) (POM)

No. Part No. SP Description

214 3-629-347-02 s GEAR, CAM (30)  
 215 3-629-348-01 s GEAR, SECOND (36)

216 3-629-364-01 s GEAR, ROLLER (28)  
 217 3-734-866-01 s FOOT  
 218 3-737-880-01 s CAP, SHAFT, WORM  
 219 3-737-886-01 s TABLE, WORM

7-624-105-04 s RING, E2.3  
 7-624-109-04 s RING, RETAINING; E-TYPE 5 (5MM)  
 7-685-645-79 s SCREW + BVTP 3X6  
 7-685-646-79 s SCREW + BVTP 3X8  
 7-685-648-14 s SCREW + BVTP 3X12

7-685-871-01 s SCREW + BVTT 3X6  
 7-685-872-04 s SCREW + BVTT 3X8

### 5-3. Electrical Parts List for Boards

#### ----- CN-1959 BOARD -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8326-302-A	o MOUNTED CIRCUIT BOARD, CN-1959
C901	1-163-038-00	s CAPACITOR, CERAMIC 0.1MF/25V
C902	1-163-038-00	s CAPACITOR, CERAMIC 0.1MF/25V
CN901	1-566-759-11	o PIN,CONNECTOR 4P
CN903	1-566-758-11	o PIN,CONNECTOR 3P
CN904	1-566-758-11	o PIN,CONNECTOR 3P
CN905	1-506-472-11	s PIN,CONNECTOR (7P)
D901	1-803-226-21	s VARISTOR (VCM21R180A151)
D902	1-803-226-21	s VARISTOR (VCM21R180A151)
D903	1-803-226-21	s VARISTOR (VCM21R180A151)
D904	1-803-226-21	s VARISTOR (VCM21R180A151)

#### ----- CN-2083 BOARD -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-679-707-11	o PRINTED WIRING BOARD, CN-2083
CN201	1-784-427-11	s CONNECTOR, D-SUB(ANGLE TYPE) 9
CN202	1-506-476-11	s PIN,CONNECTOR 11P
CN203	1-566-757-11	s PIN, CONNECTOR (PC BOARD) 2P

#### ----- LE-238 BOARD -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-679-708-11	o PRINTED WIRING BOARD, LE-238
CN251	1-565-874-11	s PIN, CONNECTOR (PC BOARD) 2P
D251	8-719-052-06	s LED SLR342MGA49
D252	8-719-158-15	s DIODE RD5.6SB
FL251	1-233-286-21	s FILTER, EMI (SMD)
R251	1-216-815-11	s RESISTOR,CHIP 330 1/16W 1608

#### ----- MEC-13 BOARD -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8326-955-A	o MOUNTED CIRCUIT BOARD, MEC-13
C101	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C102	1-104-664-11	s CAPACITOR, ELECT 47MF/25V
C103	1-115-416-11	s CAPACITOR,CERAMIC 1000PF/25V
C104	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C105	1-126-934-11	s CAPACITOR,ELECT 220MF/16V
C106	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C107	1-126-934-11	s CAPACITOR,ELECT 220MF/16V
C108	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C109	1-126-935-11	s CAPACITOR,ELECT 470MF/16V
C110	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C111	1-126-935-11	s CAPACITOR,ELECT 470MF/16V
C112	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C113	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C114	1-126-934-11	s CAPACITOR,ELECT 220MF/16V
C117	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C118	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C119	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C120	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C121	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C122	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C123	1-126-934-11	s CAPACITOR,ELECT 220MF/16V
C126	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C127	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C128	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
C129	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
CN101	1-506-490-21	s PIN,CONNECTOR 11P
CN102	1-566-760-11	s PIN,CONNECTOR (PC BOARD) 5P
CN103	1-580-106-21	s CONNECTOR, FPC 28P
CN104	1-564-001-11	o PIN, CONNECTOR (2P)
CN105	1-506-467-11	s PIN,CONNECTOR 2P
CN106	1-566-758-11	o PIN,CONNECTOR 3P
D101	8-719-158-15	s DIODE RD5.6SB
D102	8-719-158-15	s DIODE RD5.6SB
D103	8-719-158-15	s DIODE RD5.6SB
D104	8-719-158-15	s DIODE RD5.6SB
D105	8-719-158-15	s DIODE RD5.6SB
D106	8-719-801-78	s DIODE 1SS184
FB101	1-410-397-21	s FERRITE BEAD INDUCTOR
FL101	1-233-316-21	s FILTER,CHIP EMI
FL102	1-233-316-21	s FILTER,CHIP EMI
FL103	1-233-316-21	s FILTER,CHIP EMI
FL104	1-233-316-21	s FILTER,CHIP EMI
FL105	1-233-316-21	s FILTER,CHIP EMI
IC101	8-759-503-05	s IC SN74LS541NS
IC102	8-759-542-91	s IC S-80840ANUP-ED4-T2
IC103	8-759-600-24	s IC M54543L
IC104	8-759-925-74	s IC SN74HC04ANS
IC105	8-759-432-43	s IC HD6413004F
IC106	8-759-698-66	o IC SST39SF010-MEC13IC106
IC107	8-759-600-24	s IC M54543L
IC108	8-759-926-11	s IC SN74HC138ANS
L101	1-424-090-11	s COIL,LINE FILTER
L102	1-424-090-11	s COIL,LINE FILTER
LF101	1-416-846-11	s COIL, LINE FILTER

## (MEC-13 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
LF102	1-416-846-11	s COIL, LINE FILTER
R101	1-216-805-11	s RESISTOR,CHIP 47 1/16W 1608
R102	1-216-805-11	s RESISTOR,CHIP 47 1/16W 1608
R103	1-216-805-11	s RESISTOR,CHIP 47 1/16W 1608
R104	1-216-805-11	s RESISTOR,CHIP 47 1/16W 1608
R105	1-216-805-11	s RESISTOR,CHIP 47 1/16W 1608
R106	1-216-833-11	s RESISTOR,CHIP 10K 1/16W (1608)
R108	1-216-818-11	s RESISTOR,CHIP 560 1/16W 1608
R109	1-216-837-11	s RESISTOR,CHIP 22K 1/16W 1608
R110	1-216-837-11	s RESISTOR,CHIP 22K 1/16W 1608
R111	1-216-837-11	s RESISTOR,CHIP 22K 1/16W 1608
R112	1-216-833-11	s RESISTOR,CHIP 10K 1/16W (1608)
R113	1-216-833-11	s RESISTOR,CHIP 10K 1/16W (1608)
R114	1-216-833-11	s RESISTOR,CHIP 10K 1/16W (1608)
R115	1-216-833-11	s RESISTOR,CHIP 10K 1/16W (1608)
R116	1-216-833-11	s RESISTOR,CHIP 10K 1/16W (1608)
R117	1-216-833-11	s RESISTOR,CHIP 10K 1/16W (1608)
R118	1-216-833-11	s RESISTOR,CHIP 10K 1/16W (1608)
R119	1-216-833-11	s RESISTOR,CHIP 10K 1/16W (1608)
R121	1-216-829-11	s RESISTOR,CHIP 4.7K 1/16W(1608)
R122	1-216-829-11	s RESISTOR,CHIP 4.7K 1/16W(1608)
R123	1-216-829-11	s RESISTOR,CHIP 4.7K 1/16W(1608)
R124	1-216-829-11	s RESISTOR,CHIP 4.7K 1/16W(1608)
R126	1-216-833-11	s RESISTOR,CHIP 10K 1/16W (1608)
R129	1-216-845-11	s RESISTOR,CHIP 100K 1/16W(1608)
R130	1-216-864-11	s RESISTOR,CHIP 0 1/16W (1608)
R131	1-216-864-11	s RESISTOR,CHIP 0 1/16W (1608)
R133	1-216-864-11	s RESISTOR,CHIP 0 1/16W (1608)
R134	1-216-864-11	s RESISTOR,CHIP 0 1/16W (1608)
R135	1-216-864-11	s RESISTOR,CHIP 0 1/16W (1608)
R136	1-216-864-11	s RESISTOR,CHIP 0 1/16W (1608)
S101	1-570-909-11	s SWITCH, TACTIL (REFLOW TYPE)
X401	1-760-606-21	s VIBRATOR, CERAMIC

## SE-561 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8326-296-A	o MOUNTED CIRCUIT BOARD, SE-561
CN910	1-566-759-11	o PIN,CONNECTOR 4P
PH910	8-749-923-97	s IC GP2S40
PH920	8-749-923-97	s IC GP2S40
R910	1-249-412-11	s RES,CARBON 390 1/4W (SMALL)
R920	1-249-412-11	s RES,CARBON 390 1/4W (SMALL)

## SE-562 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8326-298-A	o MOUNTED CIRCUIT BOARD, SE-562
CN930	1-565-875-11	o PIN,CONNECTOR(PC BOARD)3P
PH930	8-749-923-97	s IC GP2S40
R930	1-249-412-11	s RES,CARBON 390 1/4W (SMALL)

## SE-563 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8326-300-A	o MOUNTED CIRCUIT BOARD, SE-563
CN940	1-565-875-11	o PIN,CONNECTOR(PC BOARD)3P
PH940	8-749-923-97	s IC GP2S40
R940	1-249-412-11	s RES,CARBON 390 1/4W (SMALL)

## SE-564 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8326-956-A	o MOUNTED CIRCUIT BOARD, SE-564
C231	1-164-156-11	s CAPACITOR,CERAMIC 0.1MF/25V F
CN231	1-565-877-11	s PIN,CONNECTOR(PC BOARD)5P
D231	8-719-158-15	s DIODE RD5.6SB
D232	8-719-158-15	s DIODE RD5.6SB
D233	8-719-158-15	s DIODE RD5.6SB
PH231	8-749-010-69	s PHOTO INTERRUPTER GP1S58V
PH232	8-749-010-69	s PHOTO INTERRUPTER GP1S58V
PH233	8-749-010-69	s PHOTO INTERRUPTER GP1S58V
R231	1-216-815-11	s RESISTOR,CHIP 330 1/16W 1608
R232	1-216-815-11	s RESISTOR,CHIP 330 1/16W 1608
R233	1-216-815-11	s RESISTOR,CHIP 330 1/16W 1608

-----  
SE-611 BOARD  
-----

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-679-704-11	o PRINTED WIRING BOARD, SE-611
2pcs	3-631-432-01	s HOLDER, LED
C241	1-164-156-11	s CAPACITOR, CERAMIC 0.1MF/25V F
CN241	1-565-875-11	o PIN, CONNECTOR(PC BOARD)3P
D241	8-719-938-07	s LED GL480
D242	8-719-158-15	s DIODE RD5.6SB
Q241	8-729-930-95	s PHOTO TRANSISTOR PT480F
R241	1-216-815-11	s RESISTOR, CHIP 330 1/16W 1608

-----  
SU-59 BOARD  
-----

Ref. No. or Q'ty	Part No.	SP Description
C211	1-161-485-00	s CAPACITOR, CERAMIC 0.1MF/50V
CN211	1-564-001-11	o PIN, CONNECTOR (2P)

-----  
SU-60 BOARD  
-----

Ref. No. or Q'ty	Part No.	SP Description
C221	1-161-485-00	s CAPACITOR, CERAMIC 0.1MF/50V
CN221	1-506-467-11	s PIN, CONNECTOR 2P

## 5-4. Parts List for Frame

-----  
FRAME  
-----

Ref. No. or Q'ty	Part No.	SP Description
2pcs	1-541-309-11	s MOTOR, (RF-370C) (DC) (2.59W)
HN001	-----	HARNESS, SUB (S.F HARNESS A) (TO CN202/CN-2083 BOARD)
1pc	1-569-204-11	o HOUSING, CONNECTOR 11P
11pcs	1-569-193-11	s TERMINAL, SOLDERLESS (TO CN101/MEC-13 BOARD)
1pc	1-569-204-11	o HOUSING, CONNECTOR 11P
11pcs	1-569-193-11	s TERMINAL, SOLDERLESS
HN002	-----	HARNESS, SUB (S.F HARNESS F) (TO CN203/CN-2083 BOARD)
1pc	1-569-617-11	o HOUSING, CONNECTOR 2P
2pcs	1-569-977-11	o TERMINAL, SOLDERLESS (TO CN251/LE-238 BOARD)
1pc	1-569-617-11	o HOUSING, CONNECTOR 2P
2pcs	1-569-977-11	o TERMINAL, SOLDERLESS
HN003	-----	HARNESS, SUB (S.F HARNESS E) (TO CN105/MEC-13 BOARD)
1pc	1-569-195-31	o HOUSING, CONNECTOR 2P
2pcs	1-569-193-11	s TERMINAL, SOLDERLESS (TO CN221/SU-60 BOARD)
1pc	1-569-195-31	o HOUSING, CONNECTOR 2P
2pcs	1-569-193-11	s TERMINAL, SOLDERLESS
HN004	-----	HARNESS, SUB (S.F HARNESS B) (TO CN102/MEC-13 BOARD)
1pc	1-569-620-11	o HOUSING, CONNECTOR 5P
5pcs	1-569-977-11	o TERMINAL, SOLDERLESS (TO CN231/SE-564 BOARD)
1pc	1-569-620-11	o HOUSING, CONNECTOR 5P
5pcs	1-569-977-11	o TERMINAL, SOLDERLESS
HN005	-----	HARNESS, SUB (S.F HARNESS D) (TO CN104/MEC-13 BOARD)
1pc	1-569-195-11	s HOUSING, CONNECTOR 2P
2pcs	1-569-193-11	s TERMINAL, SOLDERLESS (TO CN211/SU-59 BOARD)
1pc	1-569-195-11	s HOUSING, CONNECTOR 2P
2pcs	1-569-193-11	s TERMINAL, SOLDERLESS
HN006	-----	HARNESS, SUB (S.F HARNESS C) (TO CN106/MEC-13 BOARD)
1pc	1-569-618-11	o HOUSING, CONNECTOR 3P
3pcs	1-569-977-11	o TERMINAL, SOLDERLESS (TO CN241/SE-611 BOARD)
1pc	1-569-618-11	o HOUSING, CONNECTOR 3P
3pcs	1-569-977-11	o TERMINAL, SOLDERLESS
HN007	1-960-191-11	o HARNESS, SC A (TO CN901/CN-1959 BOARD) (TO CN910/SE-561 BOARD)
HN008	1-960-192-11	o HARNESS, SC B (TO CN903/CN-1959 BOARD) (TO CN930/SE-562 BOARD)
HN009	1-960-193-11	o HARNESS, SC C (TO CN904/CN-1959 BOARD) (TO CN940/SE-563 BOARD)

5-5. Packing Materials

-----  
PACKING MATERIALS & SUPPLIED ACCESSORIES  
-----

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8326-294-A	s ADAPTOR ASSY, SLIDE FILM
1pc	3-204-878-01	s MANUAL, INSTRUCTION
1pc	7-627-553-58	s SCREW,PRECISION +P 2X4.5
2pcs	7-685-546-19	s SCREW +BTP3X8



## Section 6

### Block Diagram

#### 6-1. Circuit Description

##### 6-1-1. CN-2083 Board

The following description is made with UYA-S90SF connected to film scanner UY-S90. A signal is passed through CN201 on the CN-2083 board from CN203 of UY-S90 so as to receive the power supply. Then, it is passed through CN202 so as to supply power to the MEC-13 board. In addition to the power supply, CN201 also contains a signal line for communicating with the slide feeder controller on the MEC-13 board and the system control CPU on the UY-S90 side.

For the power supply to the green power lamp (D251) of UYA-S90SF, CN202 supplies power to the LE-238 board via CN203. The lamp does not light when CN202 is not connected to CN101 on the MEC-13 board. In other words, it is necessary to confirm whether CN202 is properly connected to CN101 on the MEC-13 board when the power lamp of UYA-S90SF does not light.

##### 6-1-2. MEC-13 Board

The MEC-13 board is the mechanical control board of a slider feeder. The MEC-13 board mainly consists of CPU, flash ROM, and a motor driver circuit.

The CPU of a slider feeder is controlled and operated by the serial communication from the system control CPU (called a main unit hereafter) on the UY-S90 side. The communication control line is buffered by IC101. The program of CPU that is connected to the CN-2083 board through CN101 and connected to UY-S90 is stored in flash ROM (IC106). However, data is supplied by the serial communication from the main unit and designed to be rewritten by onboard. Therefore, the program can be upgraded easily (IC106 must be necessarily set to the latest version). A motor driver circuit (consisting of IC103 and IC107) is pulled up so that it is not turned on at all times when CPU is disabled, and after that, it is connected via an inverter (IC104).

CPU controls two DC motors according to the instructions from the main unit. The feed motor on the SU-59 board carries a slide. During slide carrying, the existence of a slide can be detected using the sensor on the SE-611 board. The position motor on the SU-60 board raises or lowers a cam for control using three sensors on the SE-564 board.

##### 6-1-3. LE-238 Board

The LE-238 board mounts a power lamp (D251). LED (D251) lights when the power is turned on.

##### 6-1-4. SE-564 Board

The SE-564 board is a sensor board that detects the cam position of a slide feeder. This board has three position sensors (PH231, PH232, and PH233). These sensors are a transmission-type photointerrupter. They detect the position when the slit provided in a rotary cylinder reaches the sensor block. The signal of the sensors is input through CN102 on the MEC-13 board from CN231 to pins 60, 61, and 62 of IC105 (controller) and used as a processing signal.

##### 6-1-5. SE-611 Board

The SE-611 board is a sensor board that detects the existence of a slide in a slide carrier system. On the SE-611 board, an infrared light-emitting diode (D241) and phototransistor (Q241) are arranged so that they are opposed each other. In this case, the infrared light-emitting diode and phototransistor constitute a transmission-type sensor. When a slide is passed through this sensor, light is shut off and the voltage at the collector of Q241 increases up to the value near the supply voltage. This signal is input through CN106 on the MEC-13 board from CN241 to pin 59 of IC105 (controller) and used to control a carrier system.

##### 6-1-6. SU-59 Board

The SU-59 board supplies the control power to a feed motor (M211). The drive signal that is output from IC103 (motor driver M54543L) on the MEC-13 board sent from CN104 on the MEC-13 board through CN211 on the SU-59 board so as to control the motor.

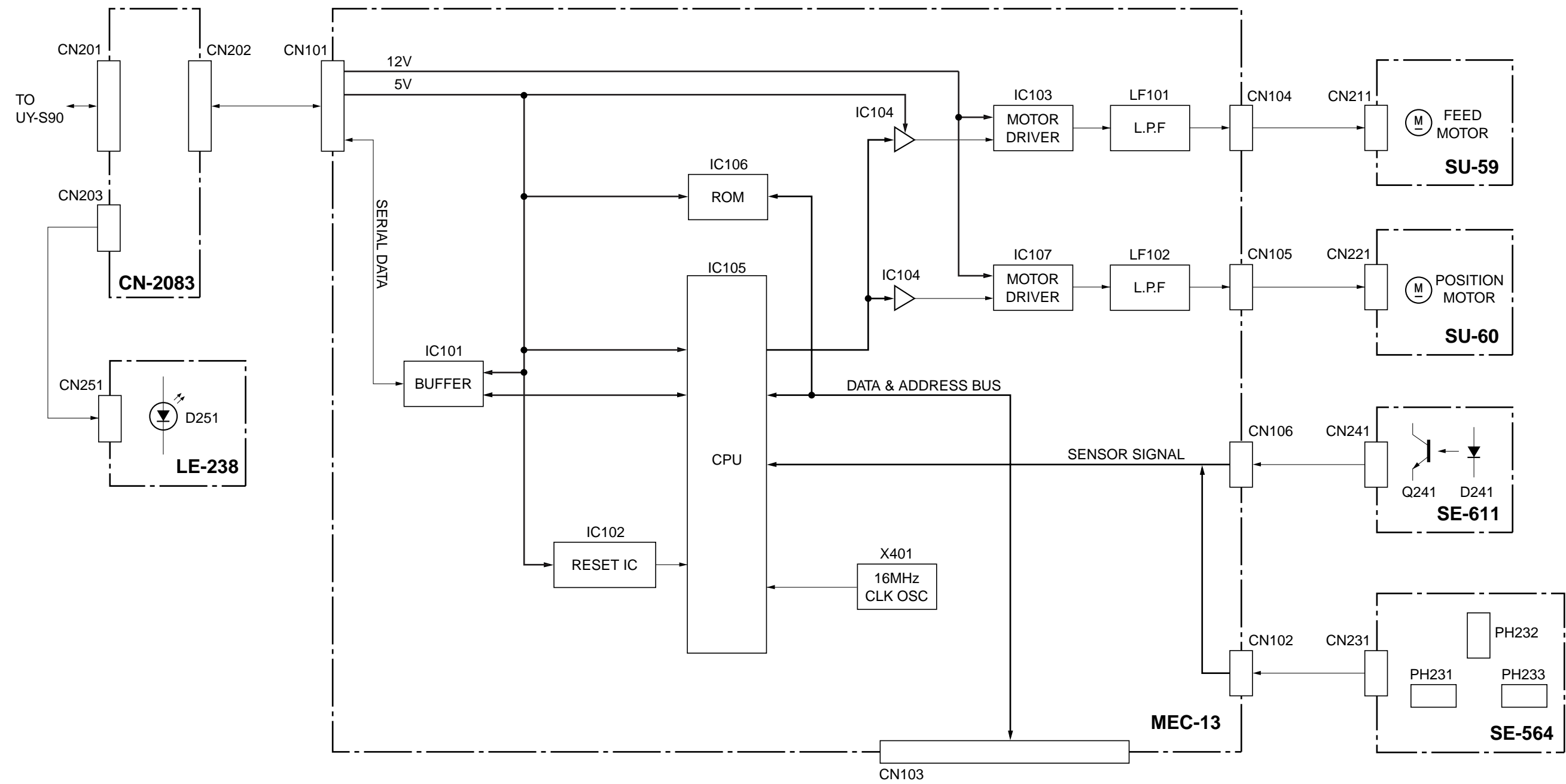
##### 6-1-7. SU-60 Board

The SU-60 board supplies the control power to a position motor (M221). The drive signal that is output from IC107 (motor driver M54543L) on the MEC-13 board sent from CN105 on the MEC-13 board through CN221 on the SU-60 board so as to control the motor.





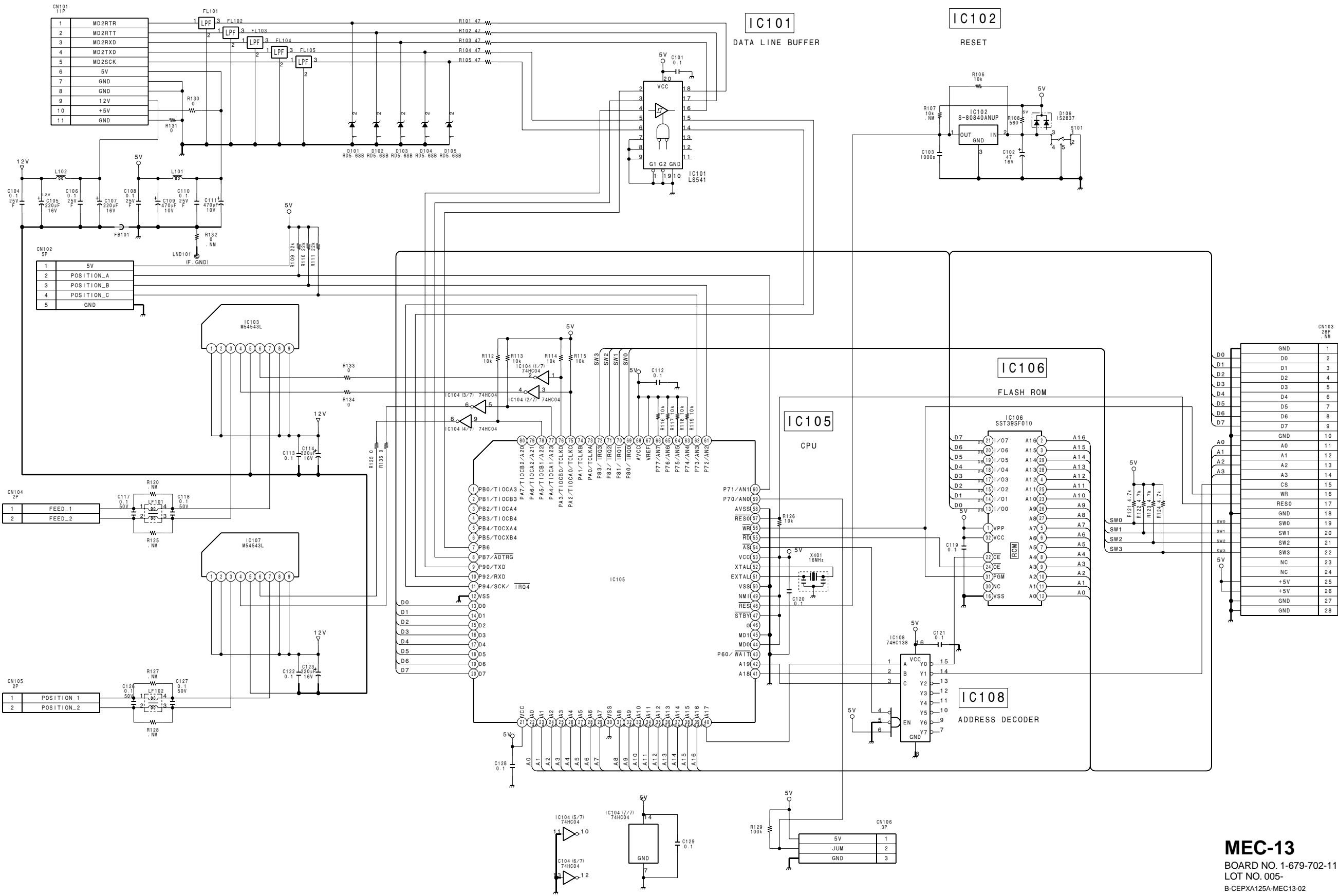
6-2. Overall Block Diagram



Overall



Section 7  
Schematic Diagrams and Board Layouts



**MEC-13**  
BOARD NO. 1-679-702-11  
LOT NO. 005-  
B-CEPXA125A-MEC13-02

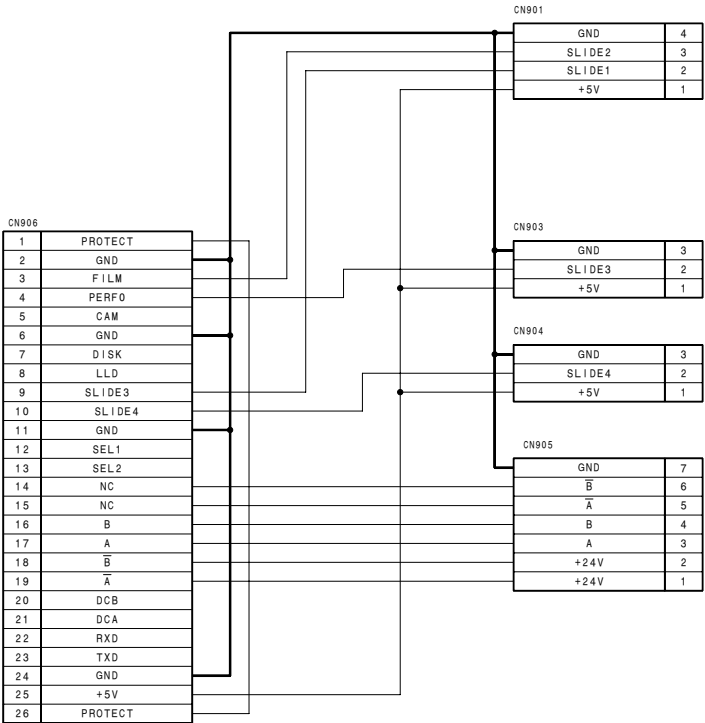
1

2

3

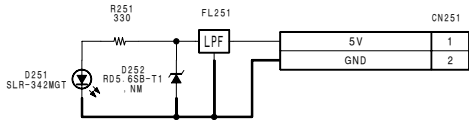
4

5



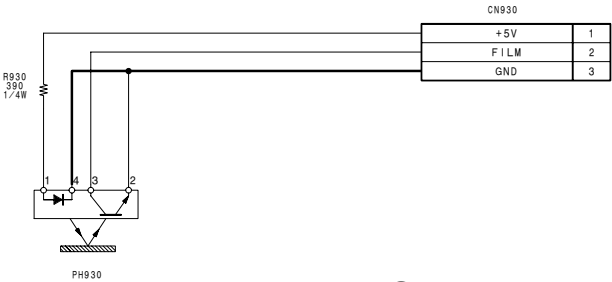
**CN-1959**

BOARD NO. 1-676-575-12  
LOT NO. 005-  
B-CUYS90-CN1959-11-PADICS



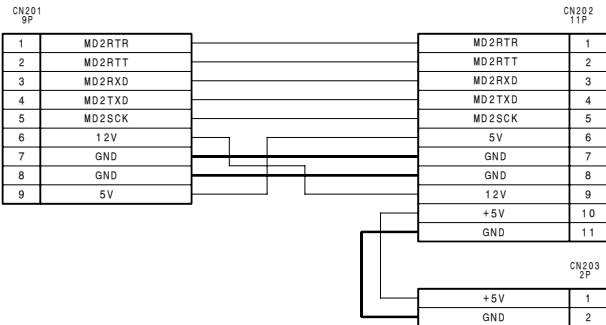
**LE-238**

BOARD NO. 1-679-708-11  
LOT NO. 005-  
B-CEPXA125A-LE238-02



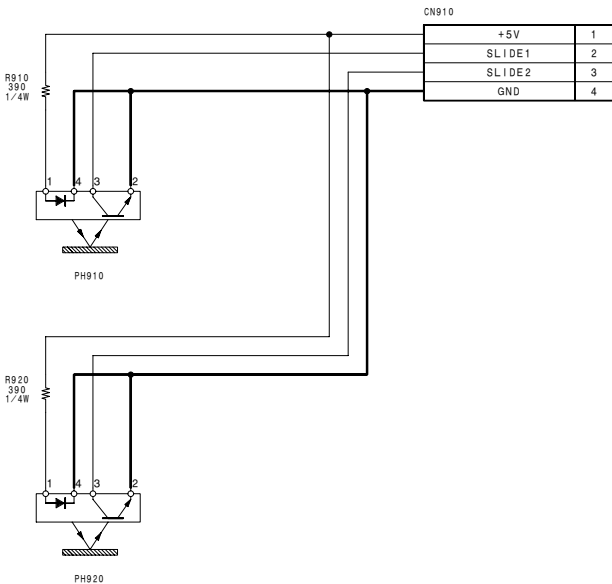
**SE-562**

BOARD NO. 1-676-577-12  
LOT NO. 005-  
B-CUYS90-SE562-11-PADICS



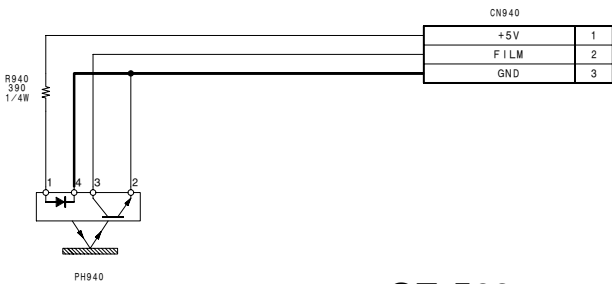
**CN-2083**

BOARD NO. 1-679-707-11  
LOT NO. 005-  
B-CEPXA125A-CN2083-02



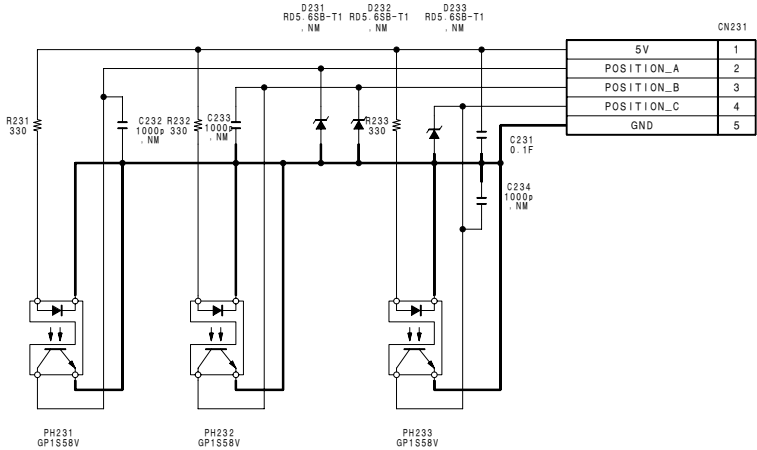
**SE-561**

BOARD NO. 1-676-576-12  
LOT NO. 005-  
B-CUYS90-SE561-11-PADICS

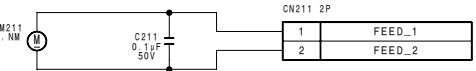


**SE-563**

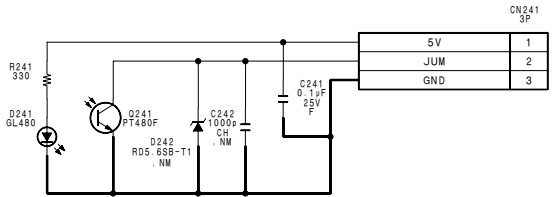
BOARD NO. 1-676-578-12  
LOT NO. 005-  
B-CUYS90-SE563-11-PADICS



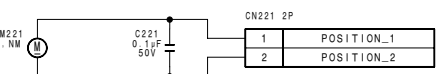
**SE-564**  
BOARD NO. 1-679-703-11  
LOT NO. 005-  
B-CEPXA125A-SE564-02



**SU-59**  
BOARD NO. 1-679-705-11  
LOT NO. 005-  
B-CEPXA125A-SU59-02



**SE-611**  
BOARD NO. 1-679-704-11  
LOT NO. 005-  
B-CEPXA125A-SE611-02



**SU-60**  
BOARD NO. 1-679-706-11  
LOT NO. 005-  
B-CEPXA125A-SU60-02

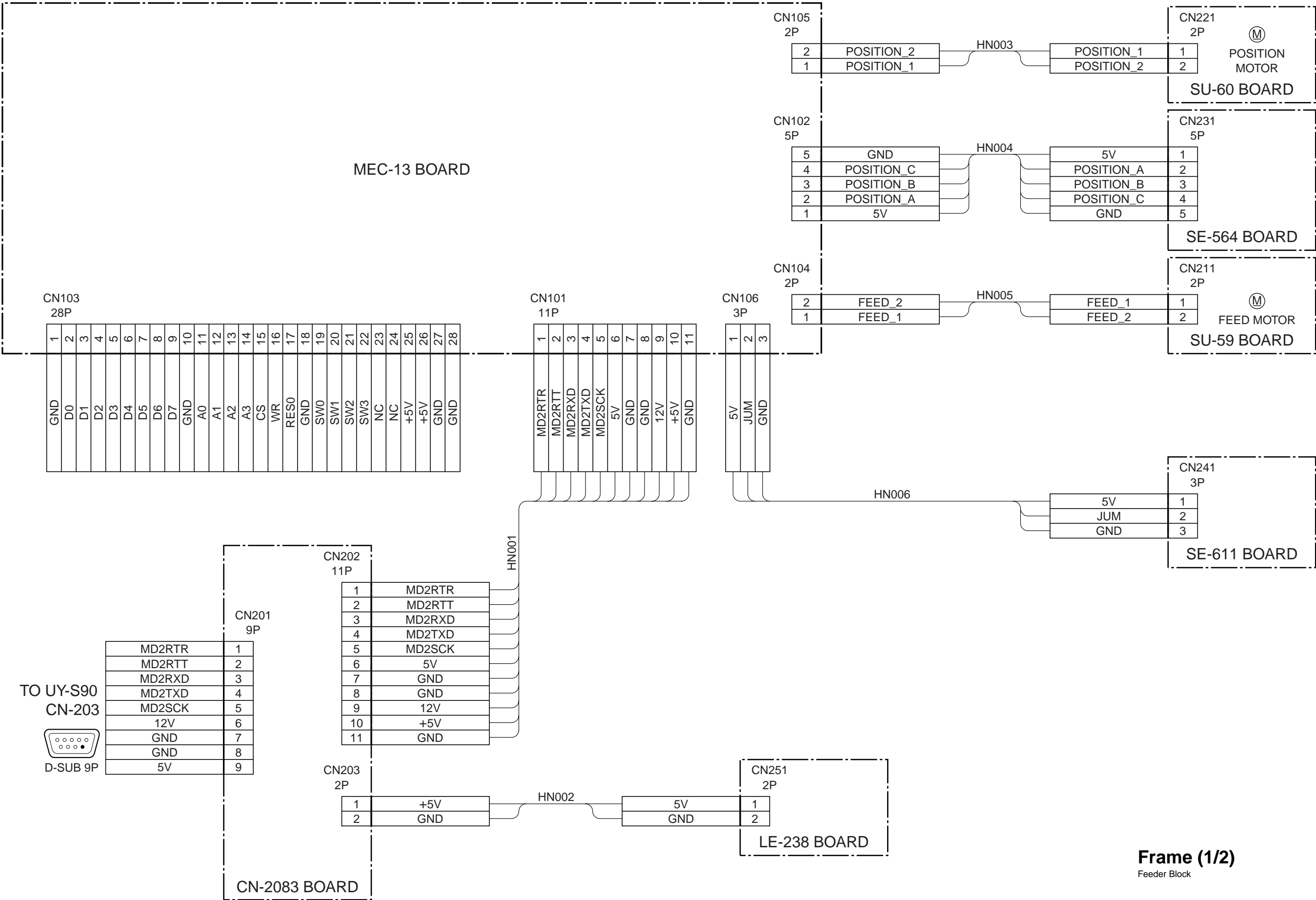
1

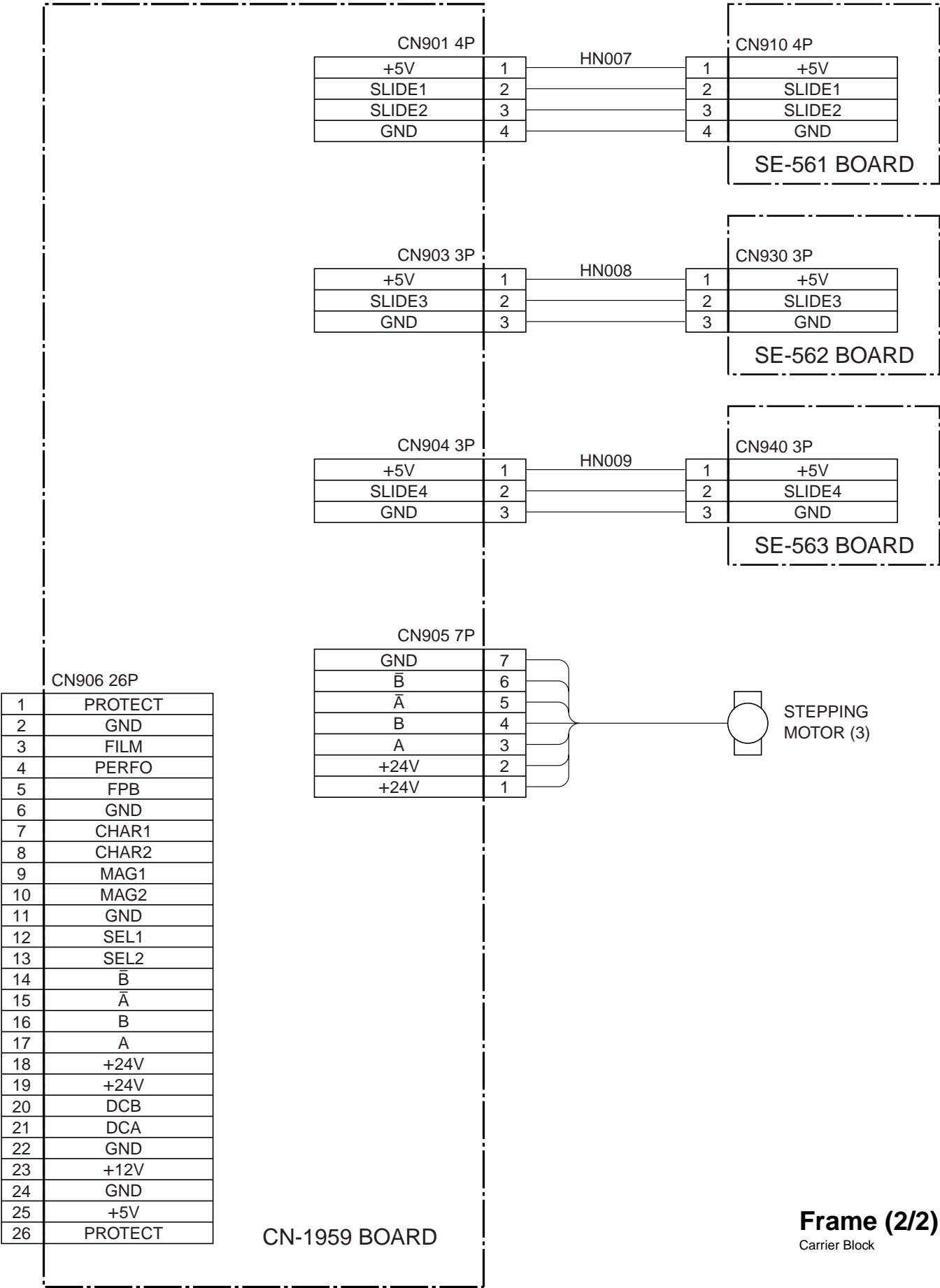
2

3

4

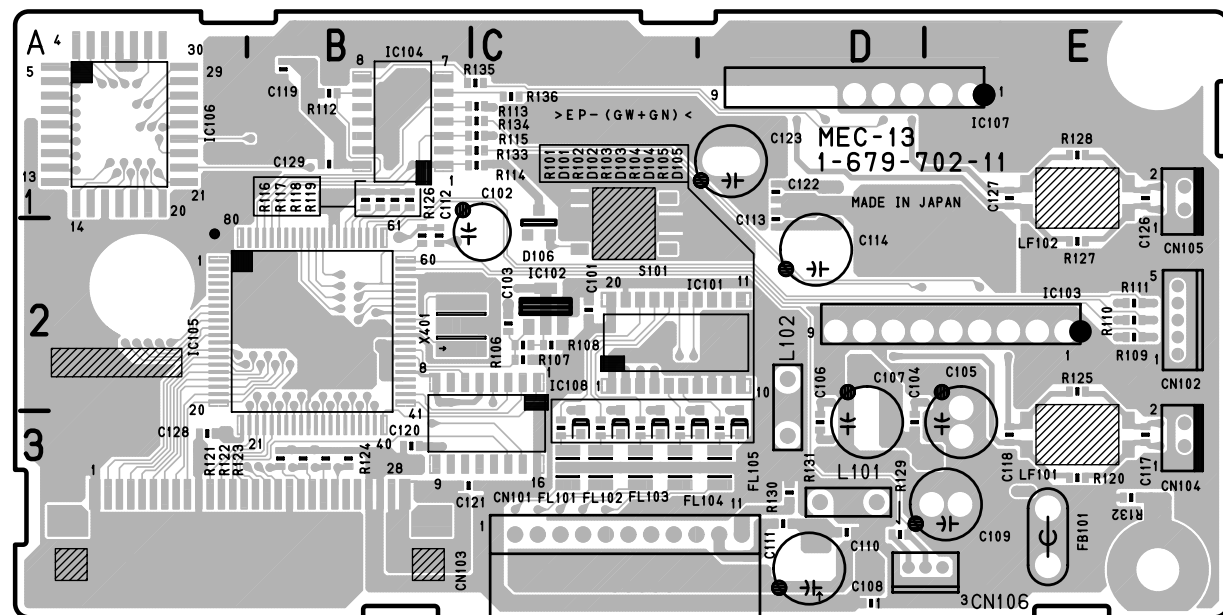
5



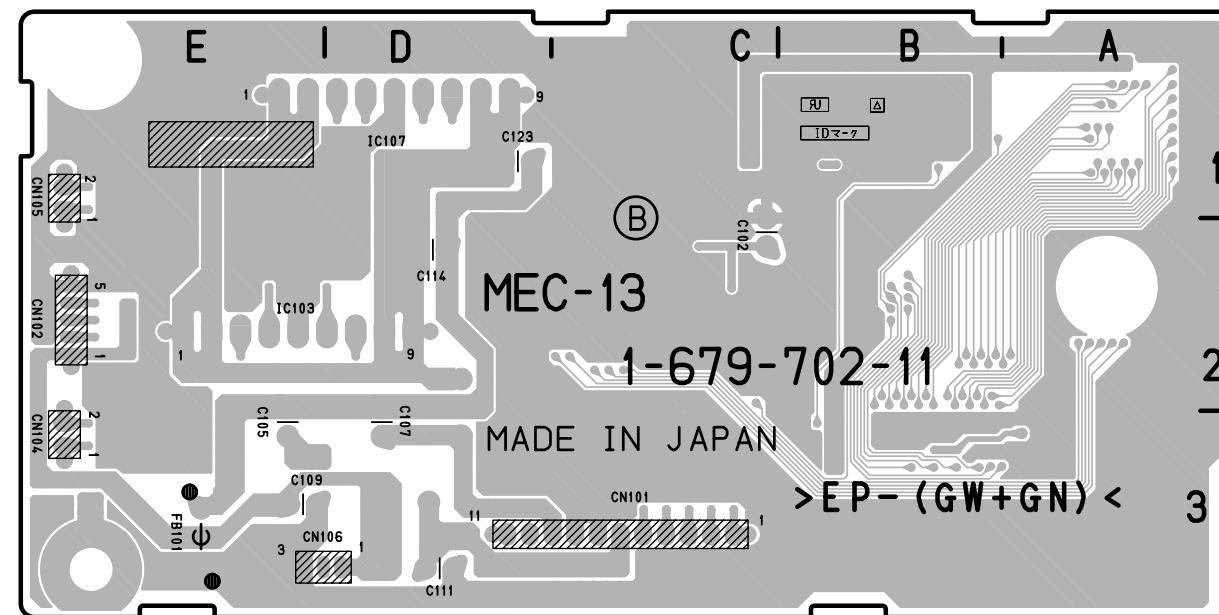


Frame (2/2)

Carrier Block



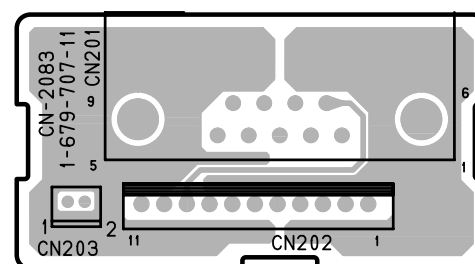
**MEC-13** -A SIDE-SUFFIX: -11



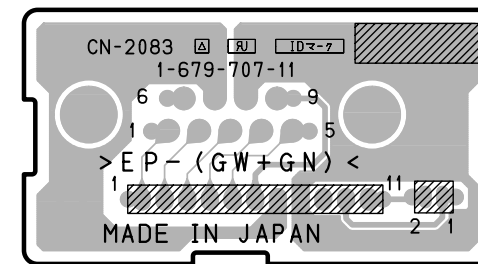
**MEC-13** -B SIDE-  
SUFFIX: -11

MEC-13 (1-679-702-11)

C101	C2	D106	C2	R112	B1
C102	C2			R113	C1
C103	C2	FB101	E3	R114	C1
C104	D3			R115	C1
C105	E3	FL101	C3	R116	B1
C106	D3	FL102	C3	R117	B1
C107	D3	FL103	C3	R118	B1
C108	D3	FL104	C3	R119	B1
C109	E3	FL105	D3	R120	E3
C110	D3			R121	B3
C111	D3	IC101	C2	R122	B3
C112	B2	IC102	C2	R123	B3
C113	D2	IC103	E2	R124	B3
C114	D2	IC104	B1	R125	E2
C117	E3	IC105	B2	R126	B2
C118	E3	IC106	A1	R127	E2
C119	B1	IC107	E1	R128	E1
C120	B3	IC108	C3	R129	D3
C121	B3			R130	D3
C122	D1	L101	D3	R131	D3
C123	D1	L102	D2	R132	E3
C126	E1			R133	C1
C127	E1	LF101	E3	R134	C1
C128	A3	LF102	E1	R135	C1
C129	B1			R136	C1
		LND101	E3		
CN101	C3			S101	C2
CN102	E2	R101	C3		
CN103	A3	R102	C3	X401	B2
CN104	E3	R103	C3		
CN105	E1	R104	C3		
CN106	D3	R105	D3		
		R106	C2		
D101	C3	R107	C2		
D102	C3	R108	C2		
D103	C3	R109	E2		
D104	D3	R110	E2		
D105	D3	R111	E2		

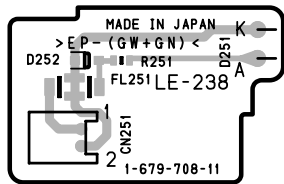


**CN-2083** -A SIDE-SUFFIX: -11

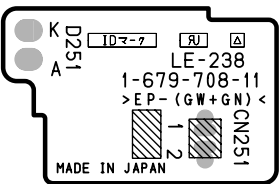


**CN-2083** -B SIDE-  
SUFFIX: -11

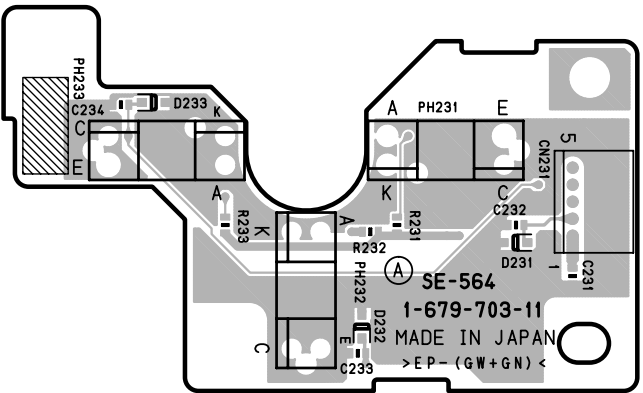




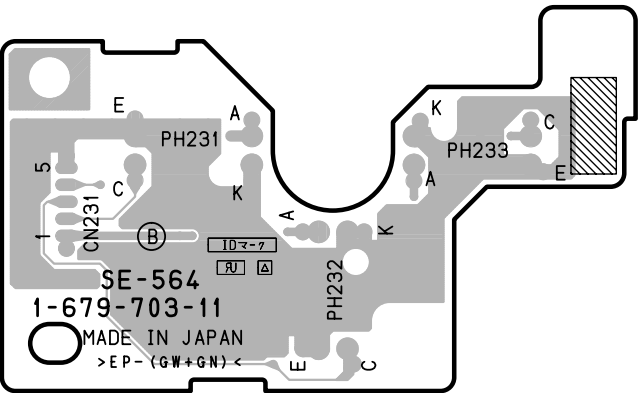
**LE-238** -A SIDE-  
SUFFIX: -11



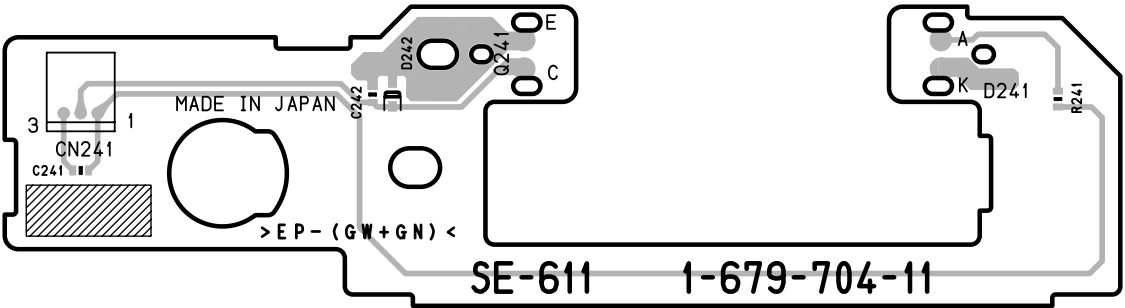
**LE-238** -B SIDE-  
SUFFIX: -11



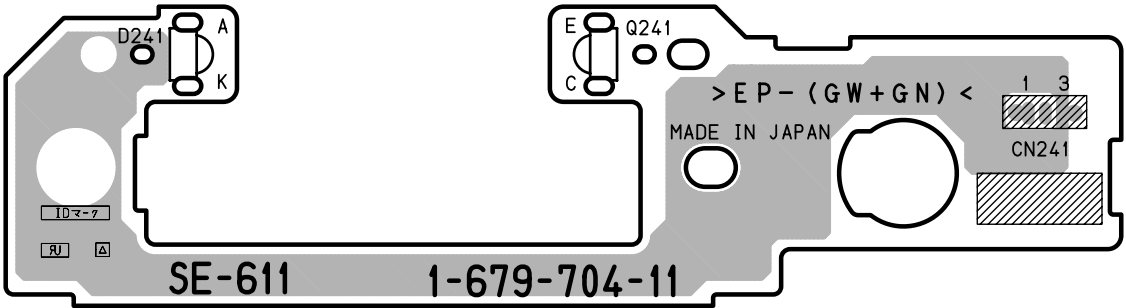
**SE-564** -A SIDE-  
SUFFIX: -11



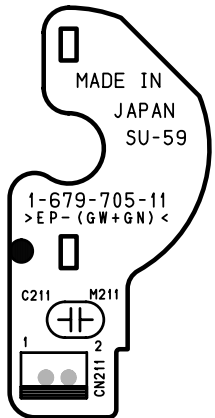
**SE-564** -B SIDE-  
SUFFIX: -11



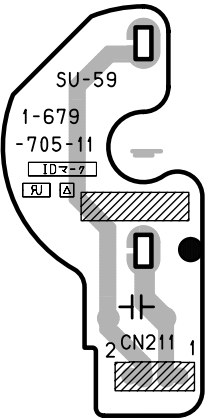
**SE-611** -A SIDE-  
SUFFIX: -11



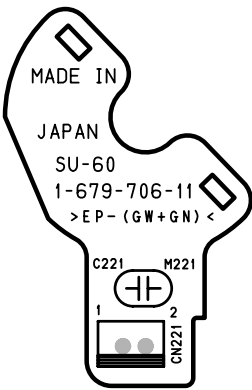
**SE-611** -B SIDE-  
SUFFIX: -11



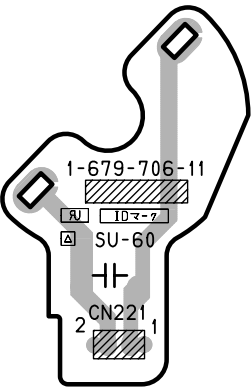
**SU-59** -A SIDE-  
SUFFIX: -11



**SU-59** -B SIDE-  
SUFFIX: -11



**SU-60** -A SIDE-  
SUFFIX: -11



**SU-60** -B SIDE-  
SUFFIX: -11





